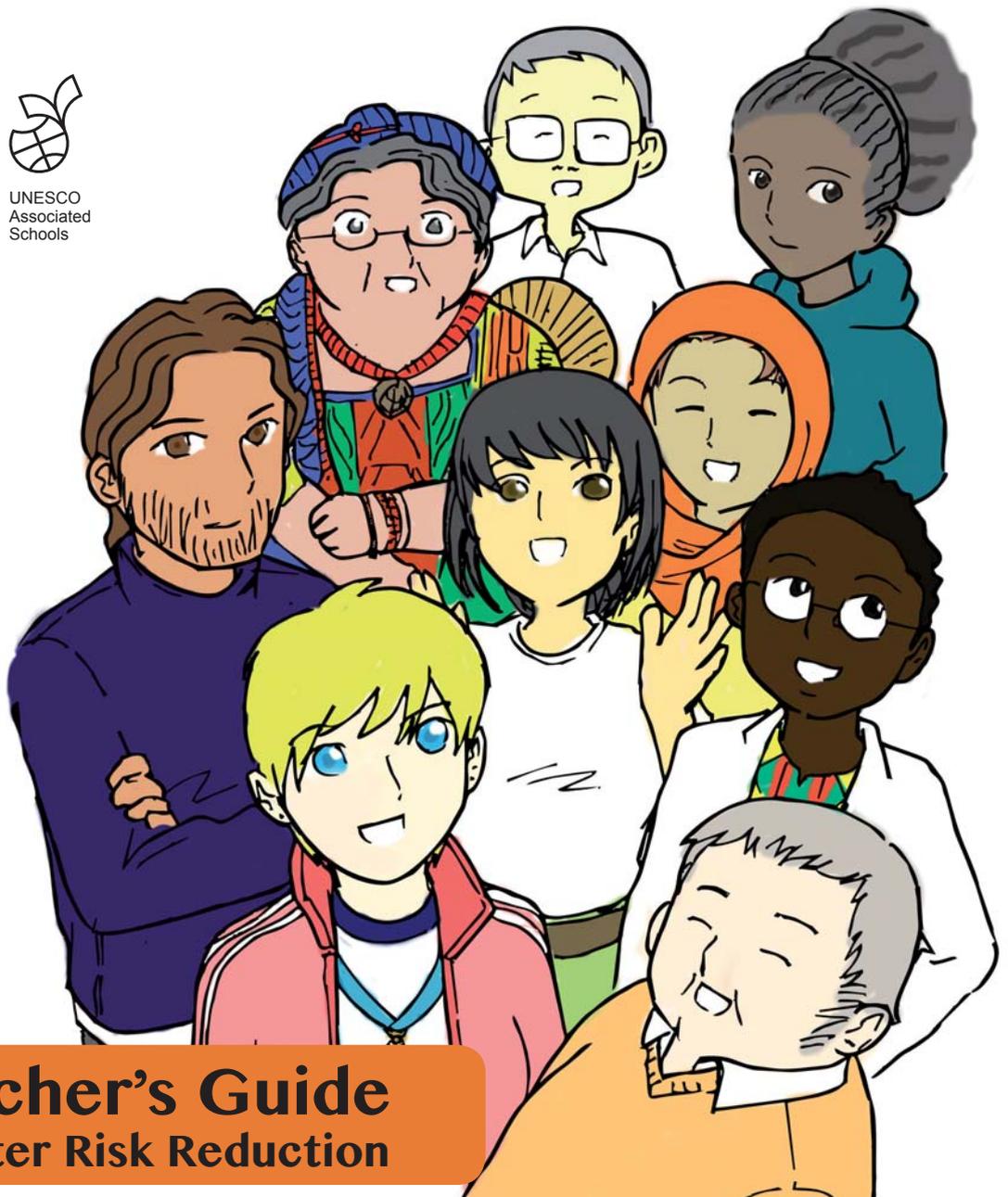




United Nations
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A Teacher's Guide to Disaster Risk Reduction

STAY SAFE AND BE PREPARED

This Guide is part of a three-book Compendium on Disaster Risk Reduction (DRR).

The other guides are:

Stay safe and be prepared: a student's guide to disaster risk reduction (ISBN 978-92-3-100031-7)

Stay safe and be prepared: a parent's guide to disaster risk reduction (ISBN 978-92-3-100045-4)

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**A Teacher's Guide
to Disaster Risk Reduction**

**STAY SAFE
AND BE PREPARED**

Dear fellow educator,

Thank you for taking the time to go through this Guide. It shows that you care about your students' and your school's safety.

You are looking at one part of a three-book compendium aimed at introducing concepts, exercises and good practices on disaster preparedness and response to teachers, students and parents. The basic idea is that comprehensive disaster preparedness and resilience-building can only take place when the whole (school) community, starting with students, parents and teachers, is involved and that it can be very successful if students are encouraged to actively take the lead on some of the activities.

The Students' Guide (for students aged 11–18) is partly designed as a comic and tells the story of 'Resilience Girl' (RG). RG was affected by a tsunami, which caused her to lose one of her legs. Her experiences encouraged her to learn as much as possible about disaster risk, preparedness and resilience. Eager to share what she has learned with peers in her new school, RG delivers a presentation — 'Be risk-smart, be prepared, be resilient.' The Students' Guide consists of three parts. The first part follows RG's presentation on basic disaster-related concepts. Part two explores the psychosocial effects of disasters. Finally, the third part presents various disaster risk reduction (DRR) activities for students to do in class, at school, at home, and in the community. At the end of the Students' Guide is a checklist on disaster knowledge and skills that allows students to assess their personal growth in becoming 'Resilience Girl' or 'Preparedness Boy.'

The Parents' Guide offers ideas on family preparedness measures and on how parents can get engaged with their child's school and their community to improve disaster preparedness and response. It also addresses the psychosocial well-being of children and outlines several exercises that parents can do to assist their child's psychosocial recovery after a disaster. Both this Teachers' Guide and the Parents' Guide are designed to support the activities introduced in the Students' Guide.

This Teachers' Guide is organized around four steps to becoming a DRR educator. The first section underlines why you and your school should take on DRR learning and outlines basic concepts to be able to effectively facilitate DRR learning. The second section provides you with ideas on how to facilitate DRR learning in your own class, with your colleagues, with parents and community members, as well as through co- and extra-curricular activities. The third section elaborates on how you can make your school a safer place. Finally, the fourth section focuses on how you can support your students' psychosocial recovery after a disaster. At the end of this Guide, you will find resources and a checklist that can support your role as a DRR educator and help you overcome challenges in facilitating DRR learning.

While DRR education encourages teachers to take an active role, the good news is that you can easily be a DRR educator. DRR learning can be done through any subject and in exciting ways.

Welcome on board!

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You Can Be a DRR Educator!



Remember your dreams of being a champion or a superhero? You can save lives by engaging your students in **Disaster Risk Reduction (DRR)** learning.

Communities all over the world have taught us that having the right knowledge, skills and attitudes to be prepared for, respond to, and recover from, disasters can mean the difference between life and death. There is hardly a more rewarding role as a teacher than working with your students to be able to do well when a disaster strikes and to make your school a safer place.

As a Risk-Smart Champion, a Preparedness Superteacher, and a Wise Resilience Educator, you can make a lot of difference in your students' life. Taking on such roles is fairly easy and it provides benefits to your teaching and even to your own family.

- You don't need to be a specialist on DRR to teach it. DRR learning can happen in any subject.
- Facilitating DRR learning does not require you to go back to university or burn the midnight oil with study. It will of course take some preparation and you should get familiar with some of the key concepts and facts. Other than that, you're ready to go in no time.
- Positioning yourself as a facilitator, you can let students take the lead on many DRR activities.
- The use of various learning methods makes classes more fun and interesting for everyone involved.
- DRR lends itself very well to working together with your colleagues and to tailoring it as co- and extra-curricular activities that involve parents and community members.
- In the process, you will learn a lot about DRR, which will allow you and your family to be safer from disasters too. You might even become a DRR expert for your whole community!

This Guide details four easy steps to becoming one or all of the above role models:

1. Knowing the basics
2. Facilitating DRR learning
3. Making your school a safe place
4. Helping students after a disaster happens

Step 1: Knowing the Basics

The first step of becoming a Risk-Smart Champion, a Preparedness Superteacher, and a Wise Resilience Educator is to understand the basics about disasters and DRR learning.

This section begins with a discussion on the importance of learning DRR at school, and why you should take on DRR learning on top of your already significant responsibilities and full schedule as a subject teacher. This is followed by an introduction to the concept of disaster risk, and finally a section on the role of gender and disability in disasters.

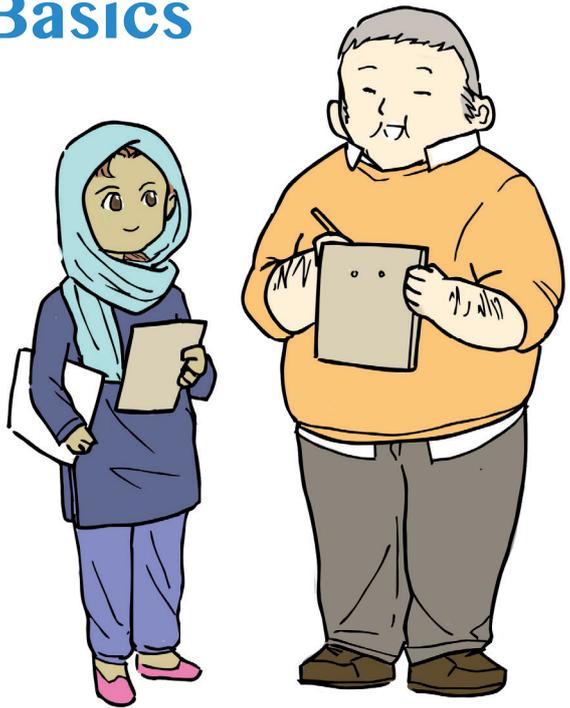
WHY LEARN DRR AT SCHOOL

There is no doubt that teaching is a very rewarding vocation. However, it comes with huge responsibilities and it certainly seems like everyone expects a lot from teachers. As a teacher, most likely, there are many topics and issues outside your subject but close to your heart that you would like to introduce to your students. Why should one of these issues be DRR?

The most important reason is that by arming your students with the right DRR knowledge, skills and attitude, you can save your students' lives in the face of a disaster. With disasters becoming more frequent and children being amongst the most vulnerable to disasters, your decision to take on DRR learning is a great contribution to humanity. The following facts and example say it all.

Global rise of disaster risk in the last decades¹

- The global number of disasters has more than doubled since the 1980s;
- An annual average of 232 million people worldwide were affected by disasters between 2001 and 2010;
- More than 680,000 people died in earthquakes between 2000 and 2010, mainly due to poorly constructed buildings;
- Every year, an average of 102 million people around the world are affected by floods, 37 million people by cyclones, hurricanes and typhoons, and nearly 366,000 people by landslides;



1. UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

- Much of the increasing world population is literally ‘on the edge,’ living in flood-prone river basins, on exposed coastlines and in cities located in areas of high seismic activity;
- Climate change increases the risk for heavy rainfall, which in turn can cause floods and landslides. It can also lead to stronger cyclones, and in many regions is likely to cause more heatwaves and droughts. Sea-level rise threatens low-lying coastal areas all around the world.



Ruins of a middle school in Ying Xiu Township after the 2008 earthquake in Sichuan, China. © UN Photo/Evan Schneider.

Children are severely affected by disasters²

- Children are particularly vulnerable to disasters, and schools are often not able to keep them safe.
- More than 50 per cent of those affected by disasters worldwide are children.
- Natural disasters are one of the key factors inhibiting school attendance of approximately 57 million school children. In particular, those who are displaced from their homes often find it difficult to get back to school in a timely way.
- For example, the 2008 earthquake in Sichuan, China, caused severe structural damage to more than 6,500 school buildings and took the lives of 10,000 children. The 2010 earthquake in Haiti caused the death of more than 4,000 children and 7,000 teachers in school buildings. The 2010 floods in Pakistan affected 1.8 million children and more than 8,600 schools were fully or partially damaged.

Teachers can save lives

Children spend a lot of time at school. What if a disaster takes place when you and your students are in class? Most likely, your students would turn to you, the adult they trust and see as knowledgeable. They will expect you to be a part of everything that is happening to them, and wait for you to tell them what to do, help them get to safety, comfort them, support their understanding of what is happening, help to reunite them with their family, and so on. Even if you personally know what to do in the face of a disaster, it would still be very challenging to take charge of an entire class — especially since everything happens so fast, meaning that decisions and actions have to be made in a matter of seconds.

As you see from the ‘Miracle of Kamaishi’ presented in the first text box, students who learn DRR are able to respond to disasters wisely and quickly. This makes your job as their teacher, as the knowledgeable adult they trust, much easier.

2. UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

THE MIRACLE OF KAMAISHI

Teachers' efforts likely saved the lives of more than 3,000 students in Kamaishi, Japan, when it was hit by a massive tsunami in 2011. Immediately after the magnitude 9.0 earthquake struck, the students of Kamaishi East Junior High School ran out of the school to higher ground. Their quick response prompted the children and teachers of the neighboring Unosumai Elementary School to follow, and consequently drew in many local residents.

As they continued to run, older students supported the younger children, and together they reached a safe location, while behind them the mega-tsunami swallowed their schools and the town. More than 1,000 lives in the city were lost due to the disasters, but only five of them were school-age children, and they weren't at school when the quake hit.

The schools were that well prepared because a flood risk specialist who was worried about the level of preparedness in the region, given the historical likelihood of a major disaster. The specialist worked hand-in-hand with teachers to prepare the students for such a disaster. Together, they came up with various classroom plans and activities for the children to learn about tsunamis and the importance of evacuation. One important step was teaching the students to take the responsibility in an evacuation and to be the first to evacuate. Others would follow. In the end, the evacuating schools saved the lives of many others who followed their example to safety. (Read the whole story at <http://mnj.gov-online.go.jp/kamaishi.html>)

DRR CONCEPTS AND TERMINOLOGIES

One of the first things you need in order to be able to effectively facilitate DRR in class is a sound understanding of the basic DRR concepts and terminologies.³ This can be best done by studying this very simple formula:

$$\text{Disaster Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity of Societal System}}$$

Disaster risk is a combination of the interactions of natural hazard, vulnerability and capacity.

Let's say the **hazard** is a 7.0 earthquake that hits a major town. How badly the town is affected by the earthquake partly depends on the **vulnerabilities** of the town's infrastructure and population. Are houses and schools sturdy? Are hospitals still reachable and running when an earthquake strikes? Here, the effects of this disaster are partially mitigated by the town's **capacity**. Strict building codes, for example, can guarantee that houses and schools are built earthquake-safe. A population that knows what to do in the case of an earthquake is likely to fare better than an untrained population.

3. All definitions in this section are based on United Nations Office for Disaster Risk Reduction (UNISDR). 2009. <http://www.unisdr.org/we/inform/terminology>

A **hazard** is a phenomenon that has the potential to cause damage to human beings and their livelihoods. It can be either natural (earthquake, storm, flood, landslide, drought, tsunami, volcano) or man-made (industrial accident, violent conflict, etc.). DRR deals primarily with natural hazards; however, you might consider including discussions of man-made hazards into your DRR teaching. Hazards only become a disaster if they affect human beings (for example, a cyclone hitting an unpopulated island is not a disaster). How they affect human beings mostly depends on the other two elements in the equation — vulnerability and capacity.

Vulnerability is the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management. Vulnerability varies significantly within a community and over time, and is closely connected to socio-economic status, age, gender, health and disabilities.

Capacity means the combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals. Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills and collective attributes such as social relationships, leadership and management.

Resilience means the ability of persons, communities and societies to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner.

This formula, of course, only gives us an approximate estimate of the disaster risk that a given area faces at a given time. But knowing about our risks (which modern science is getting better at calculating) allows us to decide how much risk our community or society can expect, which in turn allows us to make important decisions on where and how to invest limited DRR resources. Risk can be mitigated by limiting **exposure** to hazards, by reducing **vulnerabilities**, or by building **capacity**. The formula also clearly shows us that there are no real 'natural' disasters. Even when the hazard is natural, whether or not it becomes a **disaster** (a serious disruption to the functioning of our community or society, to the extent that, even with all the resources we have, we are not able to cope) depends very much on human aspects — on how a society is built and prepared.

Disaster Risk Reduction is the concept and practice of reducing disaster risk by:

- Systematically studying the causes of disasters;
- Reducing exposure to hazards;
- Lessening the vulnerability of people and property; and
- Improving the preparedness of people and communities to face hazards.

DRR aims to strengthen the **resilience** of persons, communities and societies.

GIVE IT SOME THOUGHT!

At the core of DRR learning are questions related the risk formula. Take some time to think about the questions below. Don't worry if you can't immediately come up with all the answers. Activities in all three Guides will help you to find answers. Just keep the following questions in mind:

- **What are the main hazards that your community or society is exposed to?**
- **What disasters has your community or society had to cope with?**
- **What were the social, economic and political effects of those disasters?**
- **What are your community/society's main vulnerabilities?**
- **Which groups and persons might be particularly vulnerable — what are they vulnerable to and what are the sources of their vulnerability?**
- **What capacities, expertise and resources do you have to help minimize disaster risk?**
- **What capacities, expertise and resources can you find in your community/ society that can help minimize disaster risk?**
- **How can you use those capacities, expertise and resources for teaching DRR?**

GENDER AND DISASTERS

As discussed above, the way we build and organize our societies shape vulnerabilities and capacities. Who we include, who we exclude, who we empower and who we disempower determines our society's vulnerabilities and capacities.

Gender is among the most critical aspects that may put a person or a group of persons in a vulnerable position during a disaster. Here are some facts:

- Research into disasters in 141 countries found that, when it came to deaths, gender differences were directly linked to women's economic and social rights: in societies where women and men enjoyed equal rights, disasters caused the same number of deaths in both sexes.⁴ The research also confirmed that the discrepancies were the result of existing inequalities. For example, boys were given preferential treatment during rescue efforts and, following disasters, women and girls suffered more from shortages of food and economic resources.
- In Sri Lanka, it was easier for men to survive during the tsunami because swimming and climbing trees are mainly taught to boys only.
- Following a disaster, it is more likely that women will be victims of domestic and sexual violence; they even avoid using shelters for fear of being sexually assaulted.
- In some cases, gender differences also increase men's mortality in disaster situations. Many men are exposed to risky situations and even die because they believe that society expects them to take heroic rescue actions and that because they are physically stronger, they do not need to take safety precautions. For example, there were more immediate deaths among men when hurricane Mitch struck Central America, not only because they were engaged in open-air activities, but because they took fewer precautions when facing risks.

All over the world, women play significant roles in all stages of disaster and climate risk management; they are often at the frontline as responders and bring valuable resources to disaster and climate risk reduction and recovery. However, the important roles or potential roles women take on are often not recognized or heard.

4. Neumayer and Plümpner. 2007. The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002. *Annals of the Association of American Geographers*, 97 (3). pp. 551–566. <http://eprints.lse.ac.uk/3040/>



Young girls in Yogyakarta, Indonesia, painting desks during a community clean-up after lahar floods. © Komunitas Cemara.

GIVE IT SOME THOUGHT!

- **Are there inequalities, traditions and customs in your society that might put women and girls at greater risk when a disaster strikes? Discuss with students what could be done to minimize the risks.**
- **Are girls and women included in decision-making processes when it comes to DRR and preparedness at school, at home and in the community? Discuss with students how everybody in the community, regardless of gender, age, wealth, etc. can be part of a culture of preparedness and resilience.**



DISABILITIES AND DISASTERS

Over 1 billion people worldwide live with a disability. This is about 15 per cent of humanity.⁵ Still, those 15 per cent, who might be more vulnerable to the negative effects of disasters, are often forgotten and rarely consulted when discussing disaster preparedness issues. A recent survey of people with disabilities by the UN shows that only 20 percent could evacuate immediately without difficulty in the event of a sudden disaster event; the remainder could only do so with a degree of difficulty and 6 per cent would not be able to do so at all.⁶

While every child, with or without a disability, has a right to education, in many countries children with disabilities are kept out of school and are sometimes even ‘hidden’ by their families. This makes it particularly difficult to involve them in disaster planning. Even those who attend schools are often not involved in DRR planning.

Students with disabilities should be included in all DRR learning and school safety activities, not only to help reduce their vulnerabilities, but to also harness their capacity. They can bring in important perspectives and viewpoints on how planning and preparedness can be inclusive for everyone. We discuss this in more detail in Step 3 (pp. 32–33).

A young girl in Port-au-Prince, Haiti, learns to walk with the help of a prosthetic leg. © UN Photo/Sophia Paris

GIVE IT SOME THOUGHT!

- In your community, do children with disabilities go to school? If so, do they attend special-needs classes/schools or are they integrated into regular classes/schools?
- Are there efforts by your school, community organizations, etc., to facilitate access to education for children with disabilities in your community?
- How disability-friendly is your school (construction, class integration, teaching materials, etc.)? How disability-friendly are the people in your school? What could be done to make your school and the people in your school more disability-friendly?
- In your school, are children with disabilities involved in DRR planning? How are they integrated in DRR learning?

5. World Health Organization. 2013. Disability and Health. Fact Sheet N°352. <http://www.who.int/mediacentre/factsheets/fs352/en/>

6. UNISDR. UN global survey explains why so many people living with disabilities die in disasters. 13 October 2013. <http://www.unisdr.org/archive/35032>

Step 2: Facilitating DRR Learning

“Teaching is more than imparting knowledge, it is inspiring change. Learning is more than absorbing facts, it is acquiring understanding.” (William Arthur Ward, American Writer)

The above quote is especially true when it comes to teaching and learning about DRR. When you facilitate DRR learning, you are doing much more than conveying knowledge: you are also developing the skills and attitudes your students need to stay safe from a disaster. As this section shows, DRR learning can take many different forms and be integrated in pretty much every subject.

This section is designed to provide some ideas and assistance for you to successfully perform DRR learning in different settings. It starts with an overview of the field of DRR education, followed by a note on DRR learning outcomes and facilitation approach. Then, it offers ideas on how you can facilitate DRR learning in your very own class. This is followed by a discussion on how you and your colleagues can work together to strengthen DRR learning, as well as one on how to involve parents and community members in DRR learning activities. The section ends with some thoughts for DRR-related co- and extra-curricular activities.



DRR EDUCATION — AN OVERVIEW

One of the most common ways that schools introduce students to disasters is through teaching the dynamics of hazards. In science class, students are being taught about volcanic eruptions, earthquakes, tsunamis, landslides, cyclones, floods and droughts: how they develop, when and where they occur, their frequency and power, patterns in their occurrence, how to measure them as well as their physical impacts.

While *understanding the science and mechanisms of disaster* is very important, the relatively new field of DRR education goes beyond that. As suggested by the disaster risk formula that we have discussed earlier, disaster risk greatly depends on human components: vulnerability and capacity. Accordingly, DRR education fosters an *understanding of risk drivers and how hazards can become disasters*.



Rebuilding schools in Haiti after the earthquake © UNESCO/E. Abramson.

Given the centrality of human elements in driving disaster risk, DRR education is action-oriented. It engages learners in family-, community-, and/or school-based activities that reduce disaster risk, enhance disaster preparedness and build resilience. It empowers learners to take on grassroots-level initiatives, such as performing local vulnerability assessment and mapping initiatives, identifying hazards, developing resilience action plans, and implementing those plans. This hands-on approach is geared toward *building community risk reduction capacity*.

DRR education also emphasizes *learning and practicing safety measures and procedures*. It underlines the need to be familiar with hazard early warning signs and signals, with instructions in evacuation or sheltering procedures, drills and exercises. Learners are taught basic first aid and the contents of a first aid kit, along with health and safety measures and measures to stay safe after a hazard.

Last but not least, DRR education strives to make the school a DRR learning community that is oriented towards *building an institutional culture of safety and resilience*. In such a school, principals and teachers look for possibilities to give students a voice in the curriculum, in their daily lives and in the school's decision-making processes on both the structural and non-structural aspects of safety and resilience building. The ideal is that the school becomes a DRR learning laboratory – the campus becomes part of the curriculum.

FIVE DIMENSIONS OF DRR EDUCATION

These five elements form the basis of DRR education. Ideally, DRR learning in school should address all five dimensions.

1. Understanding the Science and Mechanisms of 'Natural' Disasters
2. Learning and Practising Safety Measures and Procedures
3. Understanding Risk Drivers and How Hazards Can Become Disasters
4. Building Community Risk Reduction Capacity
5. Building an Institutional Culture of Safety and Resilience

Source: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience*. Geneva, UNICEF.

GIVE IT SOME THOUGHT!

If DRR is already part of your school's curriculum, which dimensions are well addressed? Which ones are not?

DRR LEARNING OUTCOMES AND APPROACH

As mentioned earlier, DRR learning is not only about conveying certain pieces of knowledge — it should also develop a certain set of skills and attitudes. The following box presents a list of knowledge, skills and attitudes that should be the learning outcomes of DRR learning. As you see, it encompasses a broad set of life skills that are not only useful in a DRR context. It also includes a range of attitudes that allow students to become engaged and responsible members of their community and society.

With such learning outcomes, DRR learning follows a global trend in education: empowering students through facilitation. Facilitation does not see students as recipients but as actors in the learning process. Teachers who employ facilitation put students, instead of themselves, at the centre of learning.

Here are a few essential pointers on how to **facilitate** DRR learning:⁷

- Create a secure, inclusive and non-threatening classroom climate;
- Value the contributions and experiences of everybody in class;
- Encourage students to express their ideas and feeling freely;
- Model the values and attitudes you want to teach students (respect, openness, compassion, participation);
- Resist the temptation to give students an excess of information before they have had the opportunity to share and discuss what they already know;
- Avoid giving the perception that there is only one expected outcome or one right answer in each task;
- Be flexible if the lesson moves in a different direction than you planned it as long as it's productive;
- Use an array of different methods, changing from one activity to another. Every student has their own learning style, so one method may work better for some students than for others. Mixing methods not only makes your class more interesting, but also creates space to accommodate the different learning styles in your class;
- Ensure that you regularly switch up the size of the groups (pairs, small groups, larger groups, whole class) so that students work with as many classmates as possible in different group settings;

7. UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

DRR LEARNING OUTCOMES

Knowledge

- Knowledge of self and others
- Knowledge of hazards and disasters
- Understanding key DRR concepts and practices
- Knowledge of basic safety measures
- Knowledge of disaster management mechanisms and practices
- Knowledge of the environment and of the environmental/human society interrelationship
- Knowledge of climate change
- Knowledge of differential and disproportionate impacts of hazards on people
- Knowledge of the conflict/disaster risk reduction interface
- Knowledge of human rights/child rights/gender aspects of disasters

Skills

- Skills of discernment and critical thinking
- Skills of information management
- Skills of coping, self-protection and self-management
- Skills of communication and interpersonal interaction
- Social/emotional skills
- Skills of action
- Systemic skills

Attitudes

- Altruism/valuing
- Respect
- Compassion, care and empathy
- Confidence and caution
- Responsibility
- Commitment to fairness, justice and solidarity
- Harmony with the environment

For a more detailed breakdown of the categories see: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

- Show students that you are curious and are also still a learner who is open to new inputs, ideas and skills;
- Debrief activities effectively to maximize learning and use the debriefing to encourage further learning and action outside the classroom.

FACILITATING DRR LEARNING IN YOUR CLASSROOM



Learning at Unique Child learning centre in Bangladesh. © UNESCO/GMR Akash.

As noted before, you don't need to have a special DRR subject in your school to teach DRR. Don't forget that DRR can be incorporated not only in science classes, but in every subject (see table below). With a bit of creativity, you can include DRR topics into your subject's curriculum, for example by letting students create posters about hazards in arts class, by calculating disaster risk or disaster statistics in mathematics, or by studying school safe design in vocational training class.

Subject	Examples
Agriculture	<ul style="list-style-type: none"> Studying and practicing adaptation of crop growing cultures in response to increasingly dry/wet climate conditions Learning about food preservation and food security Learning about soil degradation
Arts – Visual and Performing	<ul style="list-style-type: none"> Creating murals, collages, posters and displays on hazard and disaster themes Composing and performing song, dance, marionette shows and plays to build community awareness of DRR Using mime and body sculpture to convey the nature of hazards and possible human responses
Biology	<ul style="list-style-type: none"> Learning how a healthy ecosystem, such as a forest or a mangrove swamp, can protect a community from hazards, such as landslides and tsunamis Examining the role of wetlands in absorbing excessive rainwater and preventing floods downstream Reviewing how local deforestation has increased hazards in communities
Civics/Citizenship	<ul style="list-style-type: none"> Meeting local officials to ask about disaster preparedness strategies and structures Conducting DRR advocacy projects in the local community Engaging in community resilience-building initiatives
Geography	<ul style="list-style-type: none"> Redrawing national maps to show the effects of sea level rise on coastlines Studying the different impacts of natural disasters on urban and rural communities Looking at changes in land use as a means of building resilience and as a possible hazard
Health/Well-being Education	<ul style="list-style-type: none"> Learning basic first aid Learning safety practices and procedures to follow on the onset of a hazard Learning about potential post-disaster health threats Learning to stay safe and maintain hygiene after a disaster
History	<ul style="list-style-type: none"> Exploring impacts of natural hazards and climate change on past civilizations Studying past major national/community disasters and identifying good practices Researching indigenous/traditional DRR wisdom/practice and considering its present applicability
Language and Literature	<ul style="list-style-type: none"> Reading and discussing stories, fables, poems and news clips on disasters and hazards Composing essays, poems and stories in response to disaster-related photos, news clips or videos Writing letters to local newspapers and bodies on local DRR issues
Life Skills	<ul style="list-style-type: none"> Organizing a debate competition on disaster related topics Organizing a simulation of negotiations on the United Nations Framework Convention on Climate Change (UNFCCC) Preparing a family disaster plan
Mathematics	<ul style="list-style-type: none"> Working on measurement aspects of home and school safety Putting natural hazard data (e.g., total number of people affected and total economic cost of cyclones in different time periods) into graphs Extrapolating disaster trends based on recent statistics
Science and Technology	<ul style="list-style-type: none"> Learning about mechanisms of climatological and geo-seismic natural phenomena Model building and experimentation to understand basic principles of disaster-resistant construction Learning about the effects of human activities on ecosystems
Social Science/ Studies	<ul style="list-style-type: none"> Reviewing disaster vulnerability through human rights and child rights lenses Interviewing local community members on their hazard/disaster perspectives, memories and past practices Field visits to examine local disaster support services
Vocational/ Technical Education	<ul style="list-style-type: none"> Studying and practicing adaptation through tree and/or mangrove planting projects Constructing equipment to measure rainfall in school area Learn principles of disaster resistant design and construction

Based on: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

Your DRR lesson and activity plans, as well as your class structure and teaching methods, should be guided by a facilitation approach. We have provided a list on what lesson or activity plans should include, as well as a checklist to help apply various methods to your DRR lessons or activities:

LESSON OR ACTIVITY PLANS

- Title/topic of lesson
- Date
- Learning targets: the DRR knowledge, skills and attitudes students are supposed to develop in this lesson
- Breakdown of activities, including the methods that will be used in each activity. This can be done in five-minute segments. Again, in a facilitative approach some flexibility in time management is part of the teaching process
- Materials/resources used/needed. Break this down by activity. Include physical resources as well as technological resources (use of video camera, TV, etc.) and human resources (guest speaker, co-teaching etc.)
- Variations/extensions: ideas for different methods, taking activities further than initially planned if student interest is stronger than expected
- Evaluation criteria: what are the criteria for evaluating students' performance in this lesson?

Methods/Lesson	Lesson 1	Lesson 2	Lesson 3	Lesson 4
Brainstorming				
Small group discussion				
Whole class discussion				
Multimedia presentation				
Case study research				
Class project				
Surveys/interviews				
Media analysis/response				
Board games				
Role plays, skits, dramas, puppetry				
Simulation games				
Field visits				
Community engagement/campaigns				
Imaginal learning (visualizations)				
Somatic learning				
Artistic expression				

Source: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

In the following pages, you will find two examples of lesson plans. The first is for a chemistry class. Its water purification activity allows students to develop the skills needed to make pure water available in post-disaster situations. The second is for a social science or arts class and helps develop students' creativity and empathy, which will in turn foster the attitudes that build up resilience.

Subject	Chemistry
Title/topic	Purifying water
Time	45 minutes + 45 minutes (2 class units)
Date	1/5/2015
Learning targets	<p>Students</p> <ul style="list-style-type: none"> ■ Know the different chemical processes to purify water ■ Master the skills to purify water
Activities/Time	<ol style="list-style-type: none"> 1. Brainstorming: small group exercise (15 minutes) Ask students to form small groups (3-4 students) and discuss: if they ever had to purify water – if so, when and how; when they think it might be necessary to purify water; what tools/activities might be needed to purify water. 2. Debriefing: whole class (10 minutes) List the main brainstorming points on the board/flipchart; explain why purifying water is important, explain some of the main ways to do it. 3. Experiment: purifying water (25 minutes) Show the main ways of purifying water: filtering, boiling, using bleach, using chlorine tablets, solar purification; ask students to assist with the process; taste the purified water together. 4. Group work: purifying water (30 minutes) Ask students to form small groups, each group practices one or two methods of water purification and present the results. 5. Debriefing: how did students feel during and after the process? What have they learned? Do they think they are able to perform water purification in case of a disaster? What materials for purifying water do they have at home? Will they consider putting water purification tools in an emergency bag? etc.
Materials	<ul style="list-style-type: none"> ■ Water (should have some pollutants added, but nothing that poses health risk to students) ■ Coffee filters, cloths for filtering water ■ Boiler/stove and water flask/pot to boil water ■ Household bleach and pot for bleaching ■ Chlorine tablet and pot for chlorine purification ■ Empty plastic water bottles for solar purification
Variations/Extensions	<ul style="list-style-type: none"> ■ Depending on availability of materials/chemicals some methods might be only explained rather than shown in an experiment ■ Invite health/social science teacher to discuss the effects of lack of clean drinking water on societies ■ Discuss more advanced ways of purifying water and how they relate to the simple methods discussed in class
Evaluation criteria	<ul style="list-style-type: none"> ■ Students' participation in class discussion and group work ■ Successful replication of experiments

TIPS

- ▶ Water purification is one of the activities introduced in the Students' Guide (page 38). As the bleaching method should be done with caution, information on this method is only presented in this Teachers' Guide, not in the Students' Guide.

Bleach comes with different strengths, so look at the label to see the percentage of chlorine it has. If the strength of the bleach is unknown, add ten drops per quart or liter of filtered and settled water. Double the amount of chlorine for cloudy, murky or coloured water or water that is extremely cold. Here is a table that shows how much bleach to put into how much water:

Percentage of Chlorine in Bleach	Drops per Quart/Gallon of Clear Water	Drops per Litre of Clear Water
1%	10 drops per quart or 40 per gallon	10 per litre
4-6%	2 drops per quart or 8 per gallon	2 per litre
7-10%	1 drop per quart or 4 per gallon	1 per litre

Mix the treated water thoroughly and allow it to stand, preferably covered, for 30 minutes. The water should have a slight odour of chlorine. If it does not, repeat the dosage and allow the water to stand for an additional 15 minutes. If the treated water has too strong a chlorine taste, allow the water to stand exposed to the air for a few hours or pour it from one clean container to another several times.

- ▶ Some water purification methods take time (solar purification should be done for several hours at least). Either have some of the techniques pre-prepared or continue the activity in the next lesson (ideally between several hours and a day after the first lesson).



Displaced children in Sudan fetch water using a submerged hand pump following flooding.
© UN Photo/Tim McKulka.

Subject	Social Studies or Arts
Title/topic	Resilience
Time	35 minutes
Date	1/5/2015
Learning targets	<p>Students</p> <ul style="list-style-type: none"> ■ Know the concept of resilience ■ Can better communicate personal experiences and emotions
Activities/Time	<ol style="list-style-type: none"> 1. Demonstration (5 minutes) Use bendy/stretchable/squeezable objects brought to class to demonstrate the 'capacity to bounce back' by bending them, stretching them and squeezing them. Let students try. 2. Small group exercise (15 minutes) Ask students to work in pairs, sitting on the floor or on chairs facing each other. Ask them to think about times when they have 'bounced back' after experiencing some difficulty or setback. Have them think about the qualities they showed when they 'bounced back.' Ask students to share their story with their partner. Then ask pairs to discuss the 'bouncing back' qualities revealed by the stories. Were they similar? Or were different qualities shown in different circumstances? 3. Brainstorming and debrief (15 minutes) Conduct a whole class brainstorming session of 'bouncing back' qualities revealed by the stories, writing all ideas on the blackboard. Explain that the ability to 'bounce back' from a difficult time is called 'resilience.' Ask the class to think about whether the same qualities of resilience are needed in a school, village or other community impacted by some setback or tragedy.
Materials	<ul style="list-style-type: none"> ■ A bendy stick, a rubber band, a rubber ball, an eraser and/or any other everyday object that if bent, pulled or squeezed out of shape returns to its original shape when released ■ Blackboard and chalk
Variations/Extensions	<ul style="list-style-type: none"> ■ Have pairs form into groups of four to prepare small dramas about their 'bouncing back' experiences ■ Have the groups of four present their drama ■ Ask the class to discuss what each drama shows
Evaluation criteria	<ul style="list-style-type: none"> ■ Student participation in class discussion and small group exercise

From: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

GIVE IT SOME THOUGHT!

- **Create a lesson plan that integrates DRR education.**
- **Do you find it difficult to make such lesson plans? If so, what are the particular challenges you encounter? Try to discuss this with your colleagues.**

WORKING WITH YOUR COLLEAGUES TO FACILITATE DRR LEARNING

Working with your colleagues will help strengthen the message of DRR learning. Here are some ways on that you can do this:

1. You and your colleagues can agree to re-arrange the scheduling of DRR-related topics you teach, so that they are either taught simultaneously or in sequence. That way, students benefit from learning about DRR in more than one subject/classroom.
2. You and your colleagues can agree to teach an overarching theme (such as 'reducing disaster risk') and incorporate concepts, content, skills and development activities into your respective subjects accordingly.
3. You can invite some of your colleagues to come to your class to present on a DRR topic from their subject's perspective or to do team-teaching with you. For example, while you teach the science of climate change, you might want to invite the social science teacher to talk about the socio-economic effects of climate change.
4. You, your colleagues and the school administration can organize a DRR Week or Climate Change Week. You will need to discuss in advance which topics/methods each colleague uses and how they help achieve your educational goals. This special week can also include co- and extra-curricular activities such as excursions, exhibitions or art performances.
5. You and your colleagues can develop a special course, an online course, or an extracurricular activity on DRR that is facilitated by an individual teacher or a team of teachers. This will need support from your school administration.

TIP

Many education systems provide teachers with quite a bit of flexibility in determining the class topics and/or learning outcomes. Even if DRR education is not formally incorporated into the curriculum, it does not mean that you and your colleagues can't teach DRR in your classes. Make creative use of that flexibility to include DRR!

GIVE IT SOME THOUGHT!

- Is there a precedent for collaborating with your colleagues on certain topics? If so, which of the five methods above did you use?
- Was the collaboration a success? What worked well, and what were the challenges?
- Which of the approaches you think might be the most viable in your school? Discuss with your colleagues how you can collaborate to integrate DRR into different subjects.

INVOLVING PARENTS AND COMMUNITY MEMBERS IN DRR LEARNING ACTIVITIES

A school can't be safe if the community surrounding it is not safe, and students can't perform well at school while their parents and neighbors are affected by disasters. This is why successful DRR education engages parents and community members, perhaps much more than in other fields. It recognizes that the societal and communal components of resilience are at least as important as the personal components. Here, successful DRR learning is one that links school, students' families and the wider community.

Good DRR education creates a two-way exchange between school and community. In the one direction, the school uses and accesses (sometimes even unlocks) the resources that the community has to offer. This can be achieved by:

- Inviting community members to join the school disaster management committee;
- Inviting people with expertise in the community (disaster experts, firefighters, doctors, meteorologists, non-governmental organizations (NGOs), Red Cross/ Crescent, architects, persons with disabilities, persons who have witnessed disasters, and others) to assist with DRR classes or projects;
- Inviting experts in the community to support the school's multi-hazard risk assessment and eventual mitigation measures (Step 3 discusses multi-hazard risk assessment and school disaster management committee further);
- Asking community members (businesses, NGOs) for financial and logistical support for DRR classes and projects.

THEY DID IT, So CAN YOU!

"Students are better prepared for dealing with a flood that occurs when they are in school and they bring the materials they study home and share DRR information with their families," says Ms. Jit Bahandur Chaudhary of Bishanpur DPC, Nepal, on DRR trainings at school. Through the trainings, skills and confidence about implementing DRR have increased, and trained students freely share their knowledge with other students. Various education materials, such as DRR booklets, colouring books, games and posters, as well as school simulations and street drama performances have made learning more interesting and increased awareness.

The response to the 2008 monsoon demonstrated that when schools and communities work hand in hand, assistance to vulnerable people becomes more efficient. Schools served as evacuation centres and teachers collected cash in support of flood victims. Youth Rescuers Club (YRC) members assisted collecting data and providing direct support in evacuation efforts. Both teachers and students have realized that the existing curriculum did not adequately increase knowledge of and understanding about DRR and they have begun advocating that DRR be mainstreamed into the school curriculum.

Taken from: Dhruva Raj Gautam. April 2009. *Community-based Disaster Risk Reduction: Good Practice*, Mercy Corps Nepal. pp. 19-20.
<http://nepal.mercycorps.org/pdf/Community-%20BasedDisasterRiskReduction-GoodPractice.pdf>

In the other direction, the school can contribute significantly to making communities more prepared and resilient. Students can be important agents of change by carrying knowledge, skills and attitudes back to their families and to the wider community; teachers like you can become important resource persons for your family and the wider community. Students and teachers can, among other things:

- Encourage community-wide risk learning and strengthen risk awareness by conducting risk mapping projects;
- Educate the community about unsafe and unsound economic, social and environmental practices that increase vulnerabilities and therefore contribute to higher disaster risk;
- Strengthen preparedness by extending to community members the skills, knowledge and attitudes about preparedness that have been developed at school;
- Support vulnerable people around the school when a disaster strikes. This can be done in a number of ways, as for example by providing targeted health, shelter, and other services to those that the wider disaster response system may have overlooked. This could mean people with mental health issues, impoverished populations, new immigrants, tourists, pregnant women and persons with disabilities. The school can also open its doors for shelter and sanitation needs, provide translation to those not speaking the local language, deliver first aid to those who cannot access the hospital, etc.

The Students' Guide introduces a range of activities that involves students' families or the community. Most of these should be anchored in DRR learning at school, facilitated by a trained teacher like you. This Guide does not duplicate all of those activities but it does provide some tips and suggestions on how these activities and exercises can be successfully completed. Before we discuss those tips and suggestions, here are some general pointers on how to effectively debrief an activity⁸:

TIPS FOR DEBRIEFING EXERCISES AND ACTIVITIES

- ▶ Begin by asking a few broad, general questions to the whole class, not to individual pupils. For instance: What did you think about the activity? What new things did you learn? What surprised you about what you have done? What have you learned about disaster vulnerability and resilience in your village?
- ▶ Ask feeling questions right at the start if the activity has had an emotional dimension or has triggered an emotional response in pupils (What do you feel about...? What did you feel when...?) and only when feelings have been thoroughly aired and shared, move on to ask thinking questions ('What do you think about...?')
- ▶ Note down key points raised on the board or some flipchart paper and use as a checklist to explore different areas of discussion as the debriefing progresses.
- ▶ Whenever a student presents an idea, insight or point of view, sum up what has been said and then put it back to the class for further input.
- ▶ Encourage individuals and groups to ask each other questions.
- ▶ Offer relevant new information only at the end of the debriefing. As much as possible, build upon what the students themselves have said and recognize their various contributions.
- ▶ Also at this time, introduce corrective information to challenge and provoke discussion surrounding misconceptions/misunderstandings that the debriefing has so far failed to address.
- ▶ Display charts and work produced by groups after the session, inviting everyone to take a close look at each other's work.

8. UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

Below are the seven family- and/or community-based activities introduced in the Students' Guide.

1. Disaster risk map and disaster risk detective (Students' Guide pp. 25-27)

As discussed earlier, producing risk maps is one of the core DRR activities that students can perform and can be neatly integrated with school safety activities such as the multi-hazard risk assessment. The Students' Guide includes a step-by-step approach to create risk maps and to be a disaster risk detective (the detective part encourages students to perform research, interview community members, etc.).

TIPS

- ▶ This activity can be done in class, and can be coupled with homework assignments and excursions.
- ▶ Think of how you can integrate this activity in different subjects and make it a joint project with your colleagues.
- ▶ Make use of technology. Maybe an online map or satellite pictures can be used for students' risk maps.
- ▶ Discuss how you can integrate this activity with producing risk maps for your school and the school's neighborhood.

DEBRIEF SUGGESTIONS

- ▶ How did you feel about interviewing people you didn't know?
- ▶ How did people react to your making a risk map?
- ▶ How did you feel when you completed your risk map? (Explore students' feelings in terms of risk awareness, personal safety, etc.)
- ▶ Based on your map, how risky do you think your community is?

2. Murals and exhibitions (Students' Guide pp. 28-29)

Murals and exhibitions can bring DRR right to the heart of the community and serve as great class projects.

TIPS

- ▶ While the arts teacher might be the natural focal point for organizing murals and exhibitions, these activities lend themselves well to cross-curricular cooperation. Exhibition pieces might have science or social science topics or talk about historical developments.
- ▶ Exhibitions are a great idea for disaster weeks or disaster days.
- ▶ Try to make these activities as student-led as possible (for example, let students be project managers, organize the exhibition venue or get permissions to paint the murals themselves).

DEBRIEF SUGGESTIONS

- ▶ Why did you choose the particular topic for your exhibition piece/mural? Why is it more important than other topics you could have chosen?
- ▶ How did you come up with such particular message? (Explore the process of deliberation and decision making).
- ▶ Where did you gather the information that helped you make your exhibition piece/mural?
- ▶ In what way do you think your exhibition piece/mural will be helpful to other people?
- ▶ What did people say about your exhibition piece/mural?

3. Community activities: community clean-up, planting trees, planting mangroves (Students' Guide pp. 30-31)

These are hands-on projects that directly engage students in reducing risk or adapting to climate change and therefore provide valuable pedagogical opportunities.

TIPS

- ▶ Let students take the lead as much as possible in deciding which activities to do (based on research and learning in class) and in organizing those activities.
- ▶ Use the hazard/activity matrix proposed in the Students' Guide.
- ▶ This can be coupled with a community survey to find out about what activities people in the community would support.
- ▶ You can start small with some activities at and around school. When those are successful, scale up to the community level.
- ▶ Try to make it a real community activity by engaging parents, families, civic associations, local government, etc.

DEBRIEF SUGGESTIONS

- ▶ How did people react when you proposed the project?
- ▶ Do you feel people were enthusiastic about the project?
- ▶ Did people understand and learn about DRR throughout the project?
- ▶ What was easier or harder than you thought?
- ▶ Do you think it will change how people behave?

4. Where, when, how (Students' Guide pp. 32-33)

This activity helps students think about hazards they face in the places they frequent and discusses how they get disaster warnings when they are in those places. This activity builds on, but is not dependent on, the risk map activity.

TIPS

- ▶ Ideally, sequence this activity with the risk mapping activity.
- ▶ Use the matrix suggested in the Students' Guide.
- ▶ Encourage students to engage their families in this activity. It is an ideal way to prepare for producing a family preparedness plan.
- ▶ Encourage students to present their plans in groups or in front of class so you can point out best practices and clarify possible misconceptions.
- ▶ Get students to act! This activity can provide the research background for producing warning signs or community DRR activities.

DEBRIEF SUGGESTIONS

- ▶ Will this exercise change anything about how you go about your day?
- ▶ Share your plan with your classmates. Do they have ideas that you might want to use in your own plan?
- ▶ Discuss if male and female students, as well as disabled and abled students have similar or different plans.
- ▶ Did you discuss your plan with your family? What does your family think of it?

5. Family disaster preparedness plan (Students' Guide pp. 34-35)

This is an important family activity. As a teacher, you should prepare your students on how they can complete this activity with their parents and facilitate if there are any difficulties. Organize a debrief session once students have made preparedness plans with their families.

TIPS

- ▶ Prepare the ground by discussing school-parent DRR activities in parent meetings or send notes to parents explaining the scope and purpose of those activities.
- ▶ Alternatively, you can perform this activity in school as part of a parent-student DRR workshop.
- ▶ This might be a good time to make your own family DRR plan and share it with your students.

DEBRIEF SUGGESTIONS

- ▶ Who participated in the process of making your family's disaster preparedness plan?
- ▶ How did it work? Which parts were easy, which were difficult?
- ▶ How did you allocate the tasks?
- ▶ How did you feel after making the plan?
- ▶ Does anyone in your family have special needs, and if so, how did you include their needs in your plan?
- ▶ Did you involve any of your neighbours in your family disaster plan?

6. Preparedness bag (Students' Guide, p. 36)

This is also a family activity; however, it can have improved results if you manage the overall process, discuss the project with students beforehand and debrief after they have done the activity with their parents.

TIPS

- ▶ Do you have a preparedness bag or container in your class? Use this as a starting point to discuss the family preparedness bag.
- ▶ Ask students to show their bag and its contents to the student sitting next to them or in small groups. Let students evaluate the packing that other students did.

DEBRIEF SUGGESTIONS

- ▶ How did you feel when packing your family preparedness bag?
- ▶ What did you decide to put into your preparedness bag? Did you put in (copies of) documents — if so, which ones?
- ▶ How big and how heavy is your preparedness bag?
- ▶ Who in your family is responsible for the preparedness bag? Alternatively, does each member have one?



7. Warning signs (Students' Guide, p. 37)

This is a very community-oriented activity, where students produce warning or evacuation signs in the community.

TIPS

- ▶ This activity can build upon both the risk-mapping and 'when, where, how' activities.
- ▶ Make sure that students use durable materials.
- ▶ Make sure that students have the necessary permits to put on the signs.
- ▶ Encourage students to field test their signs by making surveys, observe people's reactions, etc.

DEBRIEF SUGGESTIONS

- ▶ Why did you decide to make that specific sign?
- ▶ Do you think everyone can see/understand the sign?
- ▶ How was the process of producing the sign? What worked well? What was difficult? How did you overcome those difficulties?
- ▶ Did you consult community members where to put the sign?
- ▶ How did people react to your sign?

CO- AND EXTRA-CURRICULAR ACTIVITIES

Perhaps you feel like you don't have enough time or energy to commit to fully-fledged DRR learning in your class. Consider using co- and extra- curricular activities that may, on the one hand, encourage further DRR learning among your students while on the other hand, mitigating some of the responsibility you feel as a DRR educator. Here are three examples.

DRR or School Safety Day

You can ask your school administration to dedicate an entire day or half-day to DRR or school safety. This can include disaster simulations, demonstrations by firefighters and emergency responders, competitions (for example a bucket race to practice extinguishing fires), first aid demonstrations, exhibitions, artistic expressions (theatre, puppet shows, songs, dances) and involve family and community members. You can pick a specific date, such as the International Day for Disaster Reduction (13 October, see <http://www.unisdr.org/2013/iddr/>) or a day that commemorates a disaster in your country. Think about inviting the media, so there's a wider coverage of your school's important activities.



DRR Club

You can encourage students to form a DRR club as an after-school activity. Students who are particularly interested in learning more about DRR can spend more time than what is available in class to practice their DRR skills and knowledge as well as produce educational materials for fellow students, families and community members. They can play an important role in school and community disaster preparedness activities. Alternatively, you can encourage existing student clubs, such as boy/girl scouts, faith-based groups or glee club, to think of ways to weave in DRR themes into their activities.

Parents' meeting/evening/workshop

Remember that many of the activities introduced in the student's Guide are family- or community-based. Don't hesitate to ask parents to take a more active role in supporting their child's DRR learning. You may need to sit down with parents to explore ways that DRR learning can be supported at home and in the community.

In post-disaster settings, organizing meetings with parents might be especially helpful. There, you can explore ways your school can support parents' and students' recovery and vice versa. Such meetings can also discuss post-disaster psychosocial issues (Step 4 provides detailed information on psychosocial well-being).

Step 3: Making Your School a Safe Place



As a teacher, you spend a lot of your time at school. Certainly, you have a major stake in making your school a safe place. Facilitating DRR learning is already a huge contribution to enhancing your school's safety. However, it is important to note that school safety also depends on ensuring the safety of school buildings and facilities, as well as the effectiveness of the school's disaster management (see Appendix for a description of the three pillars of school safety). Thus, you might want to take on additional roles beyond that of a DRR educator.

One thing you should keep in mind is that the entire school community is responsible for school safety. This means that one of the best things you can do is to get more people involved. You can bring more of your fellow teachers on board, urge school management to do certain things, and work to get parents' and the community's support.

Of the many areas where you, your fellow teachers, students, parents, and the community can help improve the safety of your school, this section discusses three:

1. School disaster management committee, which oversees school safety and preparedness measures;
2. Multi-hazard risk assessment, which links all three pillars of school safety and therefore stands at the core of school safety; and
3. Disaster drills, which directly prepare the school community for the impact of disasters.

THREE PILLARS OF SCHOOL SAFETY

- Safe Learning Facilities
- School Disaster Management
- Risk Reduction and Resilience Education

Source: Global Alliance in Risk Reduction and Resilience in the Education Sector. 2013. *Comprehensive School Safety*. http://www.preventionweb.net/files/31059_31059comprehensiveschoolsafetyframe.pdf

SCHOOL DISASTER MANAGEMENT COMMITTEE

While school safety is the responsibility of the entire school community, without a managing body, a clearing house or a focal point, it can be challenging to get everyone involved. This is why schools should consider forming and maintaining a school disaster management committee or a school safety community. Such a committee develops, adapts, implements, and updates the school disaster management plan. This will require several meetings at the beginning of each school year as well as regular meetings throughout the school year. Should hazards threaten your school (for example, a cyclone is predicted to come your way), the committee should have special meetings to discuss emergency measures.

With support from your fellow teachers, you can urge school management to create such committee. If you already have one, you can encourage the committee to be as inclusive as possible. You can help make sure that the different groups that make the school community — school administration, teachers, school staff, students, and parents — are represented in the committee. You can also help make sure that the committee is well linked to the various groups that have a stake in your school's safety. These include the local emergency management committee (which can provide technical expertise in thematic meetings), school neighbors (i.e., neighborhood associations, local businesses, local government) and representatives of vulnerable groups.

TIPS

- ▶ Even if you are not a member of the school disaster management committee, it might make sense to discuss with the committee how its activities can be linked to DRR classroom activities.
- ▶ Committee members can be used as resource persons for in-class DRR learning.

SCHOOL DISASTER MANAGEMENT COMMITTEE'S TASKS

- Encouraging personal and organizational preparedness; for example by assisting in organizing a school-wide DRR day, facilitating the creation of a student DRR club or by supporting DRR training for teachers and employees.
- Facilitating the assessment of the school's structural safety and, if necessary, take the lead on mitigation work.
- Organizing fire and building evacuation drills and simulations (minimum twice a year) as well as adjusting the school management plan after each drill or simulation.
- Performing school contingency planning and developing an educational continuity plan.

Adapted from: International Finance Corporation. 2010. *Disaster and Emergency Preparedness: Guidance for Schools*. Washington, D.C: World Bank Group. <http://www.riskred.org/schools/ifc2.pdf>

GIVE IT SOME THOUGHT!

- Is there a school disaster management committee in your school?
- If so, what are its tasks? Who participates?
- If no, discuss this issue with your colleagues, school administration and others who might be interested in setting up a committee.

FIVE STAGES OF A MULTI-HAZARD RISK ASSESSMENT

1. Looking at hazards and vulnerabilities
2. Assessing structural and non-structural safety
3. Looking at capacities
4. Creating a school risk map
5. Act

MULTI-HAZARD RISK ASSESSMENT

The multi-hazard risk assessment should be the school administration's responsibility and can be executed by the school disaster management committee. Nevertheless, you can contribute to this. In addition to pushing the school administration to conduct such assessment as well as following up on the recommendations of such assessment, you can prepare your students to conduct some parts of the assessments.

It is crucial to think of the multi-hazard risk assessment as a prime DRR learning opportunity for your students. A substantial part of the assessment can and should be done by students or in collaboration with them — for example as a class project. Even if an official assessment has already been completed, students can be encouraged to conduct their own so they can learn firsthand about this important part of DRR (see Appendix for a five-stage process for a multi-hazard risk assessment and how to involve students in every stage).

TIP

The Students' Guide has a detailed exercise on creating community risk maps (pp. 26-27), collecting DRR-relevant information and designing a family preparedness plan (pp. 34-35). Giving students the opportunity to conduct a multi-hazard risk assessment of their school and its surroundings builds the ideal foundation for them to master the necessary knowledge and skills to successfully perform those exercises.



A district-level disability-inclusive evacuation drill in Ciamis, Indonesia.
© Arbeiter-Samariter-Bund, Indonesia Office.

DISASTER PREPAREDNESS DRILLS

Regular disaster preparedness and evacuation drills are among the core school-based disaster preparedness exercises. Drills offer the opportunity to identify training needs, establish new reflexes and teach through action and repetition. As fire is one of the most frequent hazards in schools, and as such, many schools have regular fire alarms and drills. Fire drills and exercises can be coupled with teaching students how to use fire extinguishers and other ways to deal with small fires, as well as teaching them to stop, drop and roll in case they themselves ever are ever on fire. Depending on your school's exposure to hazards, you should also consider specialized drills such as:

- Drop, cover and hold (for earthquake);
- Building evacuation (for fire, earthquake);
- Putting on life jackets and practicing water safety (for flood, tsunami);
- Moving to higher ground (for tsunami);
- Take shelter (for windstorm, tornado);
- Shelter-in-place (for some hazardous materials release and violence).

Ideally, drills and exercises are conducted in conjunction with first aid training and training for light search and rescue. Older students can play an important role in school disaster management, can become part of school disaster brigades, assist with drills and evacuations as well as perform first aid and light search and rescue tasks.

As a teacher, you have an important role before, during, and after the drills (and even more in a real-life evacuation).

- You need to make sure that students know the different procedures for different scenarios and prepare them so they have know-how to respond to any of the possible hazards.
- It is important to make students aware of the importance of the drills so they don't take them lightly.
- During the drill, and especially during an emergency, remind students of the 'Four don'ts' during an evacuation: Don't Talk; don't push; don't run; don't turn back.
- Stay with your class and make sure that everybody has made it to the safe area after an evacuation.
- As a teacher skilled in DRR, you may have an important role in the school's emergency command system as well as additional responsibilities during drills, simulations and emergency evacuations.

INCLUSIVE SCHOOLS ARE SAFE SCHOOLS



A child with a disability shares a DRR story with his friend. © Arbeiter-Samariter-Bund, Indonesia Office.

Your classroom DRR learning as well as your school's disaster management will benefit greatly from being as inclusive as possible and by considering the viewpoints and needs of everyone who has a stake in safe schools. A non-inclusive disaster management plan, for example, might easily overlook the special needs that students have according to their gender (i.e., specific hygiene items and shelter security requirements for girls), ethnic/religious roots (i.e., special dietary needs for students from a minority group) or health (i.e., students in a wheelchair might have difficulties evacuating while students with hearing challenges might not effectively receive hazard warnings or evacuation instructions).

Keep in mind that pushing for inclusiveness is more than a matter of identifying the specific vulnerabilities of certain individuals and groups in your school and meeting their special needs. It is particularly important to see that inclusiveness enhances capacity and therefore reduces disaster risk. Here are a number of ideas to address disability and gender issues in your DRR learning.

Disabilities and DRR

There are at least three areas you can work on to ensure that students with disabilities are included in DRR activities:

1. Provision of appropriate learning materials and use of appropriate teaching methods
 - You may need to prepare clear pictorial images and videos, use auditory channels (songs, radio messages, drama), have DRR materials available in Braille, etc.
2. Provision of special measures in school disaster management plan
 - Make sure that disaster warnings and warning signs are designed to meet the needs of students with disabilities;
 - Make sure that safety procedures documents are available for students with disabilities;
 - Make sure that evacuation routes are safe and accessible for students with disabilities;
 - If needed, design a buddy system to support students with disabilities in disaster situations;
 - Consider the medical and mobility needs of students with disabilities in your planning processes;
 - In post-disaster settings, make sure that students with disabilities are safe and have the support they need;
 - In post-disaster settings, consider the special physical and psychological needs of students who became disabled due to the disaster.

3. Provision of space for students with disabilities to serve as resource persons
 - Students with disabilities are important resource persons who can provide valuable insights into vulnerabilities and how to mitigate those vulnerabilities. Therefore, they should be involved in all DRR activities, particularly the planning processes;
 - Teachers, school administrators, and abled students should learn how to effectively communicate with and support the needs of disabled students;
 - Families of students with disabilities can be invited to assure that they develop appropriate preparedness planning.

THEY DID IT, So cAN You!

Margarita and her classmates in Gyumri, the second biggest city of Armenia, are taking part in school lessons that can save their lives: learning about disaster risk reduction. A year ago, Margarita's only option to get a basic education was to go to a daycare centre for children with disabilities as she uses a wheelchair. Since 2012, she has been able to go to her local school, which has taken an important step forward towards full social inclusion. She attends all classes, including disaster preparedness education mainstreamed in geography or other lessons. Recently, she took part in a UNICEF- and ECHO-supported video workshop on disaster risk education. She and 13 other girls and boys developed story ideas on how best to prepare when facing some of the natural hazards in the area. They then filmed their stories and produced 60-second videos.

Taken from: UNICEF Armenia. 2014. <http://unicef.am/uniarm/story/view/helping-all-children-in-armenia-prepare-for-disasters.html>

Gender and DRR

How our societies organize around the differences between males and females, and how they ascribe particular roles to each of the sexes is called gender. In many societies, girls and women are restricted in their participation in public affairs; they earn less, are entitled to less property or are generally assigned fewer rights in society. Often, these restrictions are based on deeply ingrained cultural practices, habits, or beliefs, but in the case of a disaster, they can have direct effects on people's survival and well-being.

Facilitating gender-sensitive DRR learning means weaving in discussions about gender roles, perceptions and stereotypes throughout the process. It is crucial to underline that girls and women need to be an integral part of all DRR activities — in class, at school, in the family and in the community.

Following are some things you can do:

- Ask girls to lead group exercises;
- When debriefing group exercises, ask students if and why girls-only groups, boys-only groups and mixed groups have different results;
- When debriefing exercises, flag the different approaches and results that female and male students have (i.e., the contents of the preparedness bag, the things depicted in the risk map, the questions asked in the disaster risk detective exercise, the foreseen evacuation routes and the schedules developed in the where-when-how exercise might be very different between girls and boys). Ask students why they are different and if these differences are acceptable;
- Design some role reversal exercises. For example, you can ask a boy to pack a preparedness bag for a girl and vice versa. Then, ask students to comment on what have been prepared for

them by the other sex. You can also ask students to each make two evacuation plans/routes. One is an evacuation plan/route that they find most reasonable given their current condition. The other is a plan/route they would have taken if they were the different sex. Ask if the plans/routes are different, and if so, why. Even simple things such as clothing — likelong narrow skirts versus long pants — may cause a huge difference. Another area to flag is mobility — whether girls and boys have the same ability when it comes to running, climbing, and swimming, whether girls and boys have the same access to vehicles;

- When soliciting ideas or comments from your students, for example during a brainstorming or debrief activity, adopt a girl-boy-girl-boy sequence. Sometimes, leaving it to ‘chance’ might lead to having only boys or more boys speaking up;
- When classroom discussion is dominated by boys, you can say something like, “I wonder what the girls in this classroom think?” or “Let’s hear some ideas/comments from the girls!” Don’t give-in easily when no girls answer your call. Allow some time for them to gather some courage, even if it means that the class becomes totally silent for a minute or two. Sometimes, such silence builds up the pressure to speak. If no girl speaks up, you can provide further encouragement by saying that next time you expect to hear from both boys and girls, or move to small-group activities where girls can speak up more comfortably;
- Raise questions like, ‘What would your mother/sister/grandmother do in that situation?’;
- Bring in photos, news clips and videos to your class. It can be images of ‘normal days’ or images during or after a disaster. Ask students to identify the things that girls, boys, women, and men are doing in those images. Discuss why the different sexes seem to have different roles (ask about gender stereotypes). Discuss if this is acceptable, if this makes a certain group more vulnerable and ways to encourage change;
- Invite female resource persons to class.

THEY DID IT, So CAN YOU!

When Cyclone Sidr hit Bangladesh in 2007, Lamia Akter, a seven-year old student helped save the lives of her family and many others by passing on a cyclone warning alert she had received at school to villagers in her community of Char Bangla. ‘As soon as our teacher announced in class that there would be a cyclone and released us early,’ she explains, ‘my five friends and I returned to our village and went from door to door, telling people to store their valuables and go to the cyclone shelter.’ Many people, including Lamia’s relatives, were reluctant to go to the shelter but Lamia had learned in school what could happen if they delayed. She had also learned what action to take before, during and after a disaster. She knew that legal papers and precious

crockery should be buried at home and the place marked with a bamboo cane so that the items could be recovered afterwards. She also knew that livestock should be moved to higher ground and that people should take refuge in the nearest emergency shelter. Lamia’s quick action meant that she was able to get her family and neighbors to the cyclone shelter in time. The cyclone destroyed many homes and belongings, but Lamia and her family survived and are now rebuilding their lives.

Taken from: ActionAid International. 2009. *Disaster Risk Reduction Through Schools: A Groundbreaking Project*. p. 4.
<http://www.actionaid.org/publications/disaster-risk-reduction-through-schools-groundbreaking-project>

Step 4: Helping Students after a Disaster

As a teacher, you can play an important role in supporting your students' psychosocial well-being after a disaster.

Disasters can have strong effects on the psychological and social well-being of affected persons — students, teachers, parents or other members of the community. Death, injury, displacement and the loss of home and livelihoods can lead to feelings of despair, loss and trauma. As a teacher, it is crucial that you are aware of the psychosocial effects of disasters on your students. After all, you are one of the few trusted adults whom students interact with on a daily basis, see as being knowledgeable or even consider a role model. Keeping in mind that parents are likely to be affected and traumatized by the disaster themselves, you might be in better position to assist in your students' psychosocial recovery.

Think of the psychological processes — the thoughts, emotions, feelings and behaviors — that your students might be going through. They have significant impacts on your student's social world, including their relationships, environment, community, and culture. In the same way, psychological processes are also greatly influenced by the social environment, and these two aspects of every individual are closely interconnected. Just as 'psychological' and 'social' processes in human beings are interrelated and interdependent, most of our needs are also interrelated. When one important need is met (or not), this can affect all other aspects of life (see box).

This section begins with an outline on how children respond to disasters. This is followed by a discussion on how and why you should help students recover psychosocially. The section closes with a number of psychosocial activities you and your students can do.



**PSYCHOSOCIAL WELL-BEING
DEPENDS ON MANY ELEMENTS AND
ON THE FULFILLMENT OF A RANGE OF
DIFFERENT NEEDS, INCLUDING:**

- Biological (food, water, health/medical care)
- Material (shelter, clothes)
- Social (relationships, community, basic services)
- Psychological (emotional, cognitive, personal competence, ability to learn)
- Spiritual (sense of meaning and purpose)
- Safety

HOW DO CHILDREN RESPOND TO DISASTERS?

Children affected by disasters may be traumatized. Children typically experience trauma through feelings of loss. Examples of loss include loss of a sense of security, an ideal, or something tangible such as possession or a person. The typical response to loss is grief. Some children will verbalize their feelings, but many will not. In the majority of cases, we see children who have experienced a traumatic event or loss express their feelings non-verbally — for example, through behaviour changes.



Young boy playing after the 2005 Kashmir earthquake in Pakistan.
© UN Photo/Evan Schneider.

These behaviours manifest in several ways:⁹

- (a) 'Acting out' — This includes children who
 - Display physical or verbal aggression;
 - Are non-compliant and/or oppositional;
 - Seem angry (even if they are not overtly acting out their feelings);
 - Get into fights or bully others.
- (b) Anxiety — This includes children who
 - Become anxious, withdrawn, and clingy at school with teachers;
 - Demonstrate regressive behaviors, such as bed-wetting after they have been toilet-trained or thumb-sucking;
 - Begin stuttering or become mute;
 - Become fearful of situations they were not previously afraid of.
- (c) Perfectionism — This includes children who
 - Become 'perfect' in behaviour, attitudes and language;
 - Constantly try to overachieve and be good.

These children are often overlooked and/or ignored because:

- They feel that they must hold everything together as their lives are falling apart;
- Their parents seem to have lost control of the situation;
- They have been instructed by their parents to be good or to take care of the family.

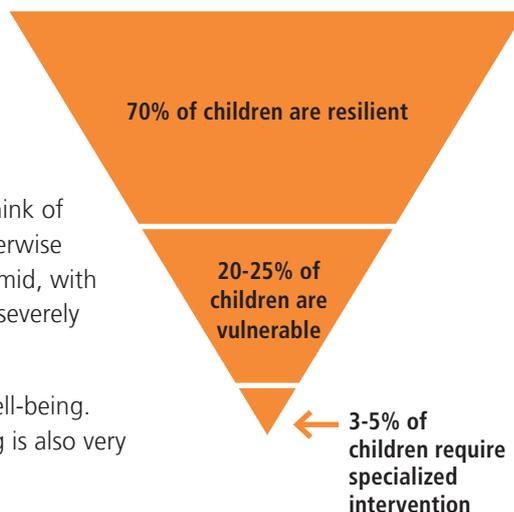
9. UNICEF and the Planning Institute of Jamaica. Undated. *Psychosocial Support for Children Faced with Disasters, A Training Manual and Toolkit for Professionals*. http://mhpps.net/wp-content/uploads/group-documents/70/1301565837-PSS_for_Children_Faced_with_Disasters.pdf

- (d) Somatic responses:
- Children will express their grief somatically. They will frequently complain about headaches, stomach-aches or other vague pains.
- (e) Cognitive functioning:
- Children experiencing grief will also show changes in their cognitive functioning in terms of concentration, learning, reasoning and a general decline in performance at school.

As children approach adolescence, their responses become increasingly like adults' responses. Greater levels of aggressive behaviors, defiance of parents, delinquency, substance abuse, and risk-taking behaviours may be evident. School performance may decline. Adolescents are especially unlikely to seek out counselling.

A simple way to imagine how children are likely to react to a crisis is to think of an upside down triangle. Children's responses to violent, shocking or otherwise distressing events and their potential for recovery follow an inverted pyramid, with the resilient majority at the wider, top part and the very small number of severely affected children at the bottom.

The next pages discuss how you can assist your students' psychosocial well-being. But first, take a look at the following box, as your psychosocial well-being is also very important.



First, take care of yourself

When a disaster strikes, you and your family might as well be affected, stressed and traumatized. To be able to effectively ensure students' psychosocial well-being, you first need to take care of your own and your families' psychosocial needs. Even if you are not directly affected by the disaster, teaching in a post-disaster setting can be very stressful and emotionally challenging.

Some tips for your psychosocial well-being:

- **Try to get back to a routine as soon as possible after a disaster.** This is true for teachers as well as for students. Getting back to teaching might help you cope with the disaster and get your life back — even if it's under the blue sky or a tent, in case your school has been destroyed.
- **Keep in mind how important you are for the students and for the community.** By helping students get back to a normal life, you also help their parents and the wider community.
- **Take care of your health.** Getting enough sleep, eating and drinking well, as well as exercising will keep your body healthy and your spirit up.
- **Take some time out to relax.** Even when things are hectic after a disaster, take a couple of minutes each day for yourself to make sense of the situation and to relax. Take a walk, meditate or listen to music — whatever works for you. Learn some relaxation exercises and use them in stressful situations.
- **Talk to others.** Discuss what you are feeling with your family, friends and colleagues. In school, when dealing with traumatized children, don't hesitate to discuss with their families, colleagues and headmasters on how to best help them.
- **Seek professional help.** Don't hesitate to seek help if you need it. Talk to a psychologist, religious authority, doctor or healer about your stresses and worries.

HELPING WITH PSYCHOSOCIAL RECOVERY – WHY AND HOW?

1. Parents might be overwhelmed by the disaster and busy getting their lives back on track

Students' parents might be affected by the disaster and might themselves be in shock, stressed or traumatized. In this situation, organizing activities for children, even if they are not formal school activities, provides parents with the space to deal with the effects of the disaster. Parents in a post-disaster situation might also not be the best judges of the psychosocial well-being of their children. To parents who are already under stress, a child's withdrawal, regression, or misconduct may be understood as willful. As well, parents may not want to be reminded of their own trauma or may be seeking some small evidence that their life is back under control and that everything is 'all right.'

2. Back to normal is important and it can take time

It is important to emphasize that what people in crisis are experiencing after a traumatic event is a normal reaction to a very abnormal situation. They should be assured that the situation will improve. Giving students this simple explanation helps them understand and address their stress. Additionally, it is important that students be encouraged to re-establish 'normal' routines such as going to school, playing, doing sports, and engaging in hobbies, as the normalcy of their daily rhythm mitigates the impact of the crisis. If possible, monitor the situation of students who don't come to school after a disaster and encourage them and their parents to do so.

Don't worry if things take time to get back to normal. In most instances, symptoms of stress and trauma gradually subside over the weeks following a disaster. However, by twelve weeks after the disaster, twenty to fifty per cent of children may still show significant signs of distress and these signs may persist even up to until one or two years after the disaster. Other children may only start showing symptoms long after the disaster (even a year or two after the disaster).¹⁰

3. Take some time to help students express their feelings and thoughts about the disaster

When children return to school after a disaster, they should not be immediately rushed back to ordinary class schedules. Instead, they should be given the time to talk about the event and express their feelings about it in whole class or small groups sessions, without forcing those who do not wish to talk to do so.

Children are sometimes prone to drawing inaccurate conclusions about the cause of the disaster, about their own actions, and about the normality of their current feelings. For example, they may believe that they are somehow to blame for what had happened. Exploration and correction of these ideas is part of regaining psychosocial well-being.

Here are some tips on how to do this:

- Recognize that students want and need as much factual information as possible;
- Allow students to discuss their own theories and ideas about what happened so that they can begin to 'master' the events;
- Tell students how and where they can obtain information and assistance;

10. John H. Ehrenreich. 2001. *Coping with Disasters: A Guidebook to Psychosocial Intervention*. Revised Edition. p. 13.
<http://www.toolkitsportdevelopment.org/html/resources/7B/7BB3B250-3EB8-44C6-AA8E-CC6592C53550/CopingWithDisaster.pdf>

- Initiate group discussions about distressing events that many may — or may not — have experienced, because even those who have not endured such events would have heard about them. This will help affected children feel less alone in their suffering;
- At the same time, do not ask students to tell their own individual stories. Recounting distressing events is usually beneficial to the speaker only if it is done voluntarily, in an environment where the child feels emotionally secure and adults are professionally trained to support the child;
- Tell students that it is okay to feel afraid, confused, angry and guilty. These are all normal responses to a very abnormal crisis or tragedy;
- Ask whether students have questions. Remember to listen carefully and be honest;
- Answer only the questions that students ask you;
- Admit when you don't have specific answers and when you are unsure yourself.



Children attend school in a temporary camp for Pakistanis displaced by heavy floods in Jamshoro, Sindh Province. © UN Photo/Amjad Jamal/WFP.

4. It's nothing new. Good education is already psychosocial work

For educators, psychosocial work is nothing new since good teaching and learning practices are good psychosocial practices. Teachers should work to create a comfortable supportive learning environment where students feel safe. For example, students in emergencies can have difficulty concentrating on lessons. Teachers can help the students concentrate by having well planned lessons with clear learning objectives, a clear beginning and an end, accompanied by a review of what has been learned, and appropriate teaching aids. Using a range of teaching methods will help to accommodate all students' learning styles. The time after a disaster might also be a good time for learning about disasters and disaster preparedness and for engaging the community on becoming more prepared and resilient.

5. When do I need to seek outside help?

You are a teacher and most likely not a psychologist trained to deal with trauma. You are not a counsellor and can't be asked to deal with all psychosocial problems occurring in your classroom by yourself. So whenever you feel you need help, ask your colleagues, headmasters, students' parents and trained professionals.

As a good teacher, try to monitor the behaviour of students who are showing signs of trauma and distress. Under normal circumstances, they should eventually recover, even if it takes time and there are setbacks along the road. When you worry about the behaviour of one or some of your students (including aggressive or self-hurting behavior, withdrawal, obsession with the disaster, decrease in school performance, long absence from school not sanctioned by parents), discuss the case with colleagues, parents, and if available, school psychological services. Some students might suffer from post-traumatic stress disorder and might need professional help. Inform yourself about which psychological services your school, your community, NGOs, or the government provide and how you can consult them when needed.

PSYCHOSOCIAL EXERCISES AND ACTIVITIES FOR STUDENTS AFFECTED BY DISASTERS

This section suggests several activities that can be done in class and/or through co- or extracurricular activities to support students' psychosocial well-being after a disaster. It also provides tips and debrief questions for activities in the Students' Guide that deal with psychosocial well-being.

1. Checking in and checking out

This activity takes place right at the beginning and right at the end of the school day/class. It allows for everyone in class to share how they feel and to be empathetic, as well as to give you an idea how students are doing emotionally. It's best if you as the teacher start. For example you could say: "Good morning. I feel happy this morning, because I have the chance to be with you again after the disaster." Or: "Good morning. I feel tired this morning, because I had bad dreams about the disaster." Then go around class and allow students to air how they feel. Don't force any students who don't want to participate. At the end of the process, thank the students for sharing their feelings. The same exercise can be repeated before the class/school day ends. Think about approaching students in private who constantly air negative feelings and ask if you can help.

2. Relaxation exercises

Relaxation exercises are good for dealing with stress. Anxiety, fearfulness and nervousness are normal reactions among children after a disaster and such exercises can provide relief of stress and negative emotions. Learning relaxation exercises might also be helpful for you as a teacher to deal with a stressful post-disaster situation. Relaxation exercises might not come naturally to everyone, therefore practicing regularly will improve the effect of these exercises. Relaxation exercises usually have three components: breathing, visualization and physical movement.

Here is a suggestion for a relaxation exercise using all three of those elements:

- A.** Discuss stress symptoms with students. Discuss what happens when we are tense and stressed (heart rate increases, muscles tense, headaches, woozy, can't sleep);
- B.** Ask students what triggers stress for them since the disaster happened (memories, smells, certain sounds, aftershocks);
- C.** Tell them that relaxation exercises can be very helpful in a situation when stress and negative emotions seem to overwhelm us. Make the point that relaxation needs to be learned like any other activity;
- D.** Ask everybody to stand up (maybe form a circle; make sure students have enough space; you can even go outside if the weather is nice);
- E.** Perform the following steps:
 - Ask students to think of their favourite colour or a colour that makes them happy.
 - Ask them to close their eyes and visualize that colour.
 - Now ask them to breathe in slowly and deeply through the nose and exhale through the mouth.
 - Repeat breathing in and out a couple of times until students have a good rhythm.
 - Ask students to imagine that every time they breathe in, the air is their favorite colour.

- Tell them to feel how that colourful air enters their nose, lungs and then the whole body, bringing positive feelings and positive energy.
- Repeat several times.
- Next, ask students to squeeze their hands to a fist, pretending that they are squeezing a ball. Make the point that their muscles are tense at this moment. Ask them to relax and loosen their hands. Make them note how their hands feel better when they are relaxed.
- Ask students to make a fist when breathing in and to relax their hands when breathing out. Repeat a couple of times.
- Ask students to raise their arms above their head when breathing in, stretching as high as they can, trying to reach a rainbow. When breathing out ask them to lower their hands. Repeat.
- Next ask students to tense their leg muscles when breathing in and relax them when breathing out. Keep reminding students on how good it feels when body parts are relaxed.
- After this, ask students to relax their whole body, while breathing in and breathing out. Ask them to focus on their breathing and on how relaxed they are.
- Ask students to slowly start wiggling their toes and fingers and then arms and legs before opening their eyes. Give students some time to 'wake up.' Thank everybody for their effort and move on to other activities.

TIPS

- ▶ Think about how you could include relaxation exercises into your regular class schedule.
- ▶ There are many different relaxation exercises: pick one that is culturally appropriate for your country/region.
- ▶ Relaxation exercises can also be coupled with prayers and/or meditation.
- ▶ Maybe someone in your community is an expert on this. Invite her/him to your class.
- ▶ Alternatively, this exercise can be done while seated or lying down.
- ▶ Think of playing some calming music throughout the exercise.



A teacher dancing in front of her students in one of the schools in Cité Soleil, in Port-Au-Prince, Haiti.
© Shutterstock/Arindambanerjee.

3. What happened?

Talking about what happened is often the first step of psychosocial recovery. Still, it might not come easy for children who are traumatized and therefore guided exercises can help. Students can describe what they heard, saw, felt, smelled and tasted. As a teacher, it is important that you validate students' experiences, including their 'sense statements' about what they heard, felt, saw, smelled, tasted. Students can also learn that everybody experiences the same situation differently and that this is okay.

Subject	Any
Title/topic	What happened?
Time	50 minutes
Date	After a disaster
Learning targets	<ul style="list-style-type: none"> ▪ Help students revisit and express their sensory experiences during the disaster ▪ Allow students to share their disaster story
Activities/Time	<ol style="list-style-type: none"> 1. Briefing (10 minutes) Put a large piece of paper on the wall and divide it into five segments (you can also use the whiteboard). Draw a symbol for one of the five senses (ear, eye, nose, mouth, hand) in each box. Tell students that the class is going to talk about what happened during the disaster while going through each sense. 2. Class discussion (30 minutes) First, ask students to share what they remember about the disaster. Then go through each sense and ask students, what they felt, smelled, heard, saw, etc. Validate their experiences, but correct any misperceptions. Write the answers down on the fitting segment of the paper/board. Respect the fact that some children won't want to share their experiences. You can always let them know that you are available for them to talk about their experiences if they want to do so at a later point. 3. Debrief (10 minutes) Here are some possible debrief questions: <ul style="list-style-type: none"> ▪ How did it feel to share your experiences about the disaster? ▪ Why do you think it's important to share our experiences and feelings after a disaster? ▪ How do our senses help us get a picture of what happened? ▪ What were other experiences that your senses helped you to remember? (lead to positive experiences such as birthdays, special events, etc.)
Materials	<ul style="list-style-type: none"> ▪ Whiteboard or large white paper ▪ Coloured pens ▪ Crayon
Variations/Extensions	<ul style="list-style-type: none"> ▪ After the exercise, ask students to draw a picture about what they experienced, bring it home and share it with their parents
Evaluation criteria	<ul style="list-style-type: none"> ▪ Psychosocial activities should not be used for evaluating students

Adapted from: Gurwitch, R. S. and Messenbaugh, A. K. 2005. *Healing After Trauma Skills*. University of Oklahoma.
http://www.nctsn.org/nctsn_assets/pdfs/edu_materials/HATS2ndEdition.pdf

4. Drawing feelings

After a disaster, children have to deal with a range of emotions. When they are traumatized, recognizing their feelings and emotions might be difficult. Being able to recognize and express them might facilitate communication between students, parents and teachers and is a first step of students learning how to deal with difficult emotions. By recognizing emotions in themselves, students will also learn to be empathic towards other's emotions.

Subject	Any (drawings can be more sophisticated when this is part of an Arts class)
Title/topic	Drawing emotions
Time	50 minutes
Date	After a disaster
Learning targets	<ul style="list-style-type: none"> ▪ Helping students recognize their feelings ▪ Allowing students to empathize with other students' feelings
Activities/Time	<ol style="list-style-type: none"> 1. Briefing (10 minutes) Talk about the range of human emotions and note that everybody has different feelings at different times. Note that after a disaster it's normal to have a range of different emotions, sometimes many at the same time. Note that it's okay to have those feelings. Make a point about empathy, noting that everybody else also has feelings that should be respected. 2. Drawing (20 minutes) Ask students to make a drawing of a feeling they have had after the disaster or a feeling they think someone in their class/family had after the disaster. 3. Presentation and debrief (20 minutes) Ask students who are willing to share their drawing with others. Note down the emotion they describe on the board. After the presentation, discuss the number of similar/different feelings. Again, validate students' feelings and point out the need to respect other people's feelings. Here are some possible debrief questions: <ul style="list-style-type: none"> ▪ How does talking about your emotions make you feel? ▪ What feelings do you think people in your surrounding had right after the disaster? What feelings might still be there? ▪ How often do certain feelings occur/reoccur? Do they get more frequent or less frequent over time?
Materials	<ul style="list-style-type: none"> ▪ Paper ▪ Coloured pens, crayons, water colours, etc.
Variations/Extensions	<ul style="list-style-type: none"> ▪ Students can form groups and perform their feelings through pantomime
Evaluation criteria	<ul style="list-style-type: none"> ▪ Psychosocial activities should not be used for evaluating students

Adapted from: Gurwitch, R. S. and Messenbaugh, A. K. 2005. *Healing After Trauma Skills*. University of Oklahoma. http://www.nctsn.org/nctsn_assets/pdfs/edu_materials/HATS2ndEdition.pdf

5. Engaging parents on psychosocial issues

In most cases, parents are the primary caregivers we expect to assist with children's psychosocial recovery. Their role is critical, especially when school activities are disrupted by a disaster. As a teacher, you might want to work with parents immediately following a disaster. You can, for example, organize a parents' meeting or visit students' parents separately. You can listen to parents' stories, acknowledge concerns they have about the situation and their children's emotional state. You might suggest psychosocial activities they can do at home to support their children while school is closed. Offer any help that you can, such as contact with specialized services. Be careful not to offer any support that you cannot provide. Even when school has re-opened, it is beneficial to keep in close contact with students' parents to be able to support students who are having difficulties coping with the traumatic experience.

TIP

The 'Healing After Trauma Skills Manual,' from which we have adapted some of the above exercises, provides suggestions on how psychosocial classroom exercises can be followed up with activities at students' home. See more details about the manual in the resource section at the end of this guide.

6. Artistic and expressive activities

Engaging students in artistic and expressive activities is an important way to support their psychosocial well-being after disasters. Younger children often have difficulties expressing emotions verbally, and even older children and adolescents frequently prefer expressive activities to verbal ones. One psychologist notes: "As with conventional verbal techniques, the goals of expressive techniques include ventilation of feelings, creating a new narrative about terrifying events, regaining a sense of control and mastery, working through grief, finding and feeling support from peers, and normalizing unexpected and unfamiliar reactions."¹¹

The Students' Guide (pp. 40-42) suggests a number of artistic and expressive activities, from theatre and puppetry to writing postcards and letters. These activities can support psychosocial well-being after a disaster, but can also be used for a wider array of risk reduction and preparedness activities.

a. Puppet shows and theatre plays (Students' Guide, pp. 40-41)

Puppets are great tools for students to express themselves and can be used in many different ways. In post-disaster settings, they can be used to help students tell their stories and express their feelings. When students make the puppets themselves, they gain even more ownership of the process and can train their creativity. Drama and theatre can fulfill some of the same functions.

11. John H. Ehrenreich. 2001. *Coping with Disasters: A Guidebook to Psychosocial Intervention, revised Edition*. <http://www.toolkitsportdevelopment.org/html/resources/7B/7BB3B250-3EB8-44C6-AA8E-CC6592C53550/CopingWithDisaster.pdf>

TIPS

- ▶ Offer students different ways of using puppets — self-expression, pair and group exercises, expressing in front of an audience.
- ▶ Older students can use puppet shows or theatre to educate younger students or the community about safety, hygiene or DRR messages after a disaster.
- ▶ Depending on the local culture and audience, means of expression might be different. Discuss which ways of expression might be the best to reach the audience.

DEBRIEF SUGGESTIONS

- ▶ Why did you choose to make and/or play that certain character?
- ▶ How did you feel when you were making the puppets?
- ▶ What feelings was the character trying to express and why?
- ▶ Does that represent your feelings?
- ▶ How did you come up with the story?
- ▶ Why did you choose the particular audience?
- ▶ How did the audience react? What would you make differently if you would do it again?

b. Postcards, letter, pictures (Students' Guide, p. 42)

Sharing stories via writing or drawing is also a very popular psychosocial activity. Depending on circumstances, students might want to share their letters or postcards with friends, peers or parents. You can also organize an exchange of letters or drawings among children that have also gone through a disaster, maybe from an area that has recovered from one. This gives students hope that things will improve after a while.

TIP

As we're living in a digital age, you might consider connecting your students with others who were affected by a disaster via email or social networking sites.

DEBRIEF SUGGESTIONS

- ▶ Who did you send your postcard/letter/e-mail to? Who did you share your drawing with?
- ▶ How did it feel to share your story with others?
- ▶ Was it difficult to share your story with others? Why?
- ▶ Did the other person reply? How did you feel when you received their answer?

c. Songs and tales

A very creative approach to encourage students to share their stories and/or DRR knowledge is through songs or tales. Here, traditional or modern songs and tales can be adapted by creating new lyrics or by changing the storyline to include DRR messages.

DEBRIEF SUGGESTIONS

- ▶ What feelings does your song/tale express?
- ▶ How did you come up with the lyrics/story?
- ▶ How did it make you feel to create the lyrics/story?
- ▶ How did you decide who to tell it/sing it to?
- ▶ How did the audience react?

Ready, Set, Go!

It should be clear by now that whatever subject you teach at school, you can easily assume the role of a DRR educator.



A young girl reading in front of a make-shift shelter after the 2004 Kashmir earthquake in Pakistan.
© UN Photo/Evan Schneider.

GIVE IT SOME THOUGHT!

- Which appropriate knowledge, skills, and attitudes do you have to support your role as a DRR educator?
- Which knowledge, skills, and attitudes do you need to acquire to strengthen your role as a DRR educator?
- What would you do, or who would you consult, to acquire those knowledge, skills, and attitudes?
- Do you find it necessary to pass on those knowledge, skills, and attitudes to other teachers? If so, how would you do so?

The next pages will provide you with some tips on how you can overcome some of the challenges along the way. Then, at the end of this section, you'll find a checklist that will help you assess not only your current DRR skills, but also your improvement over a year. You'll also find a list of resources that may enrich your DRR teaching. Keep in mind that this Guide is just one part of a DRR compendium, and that the Students' and Parents' Guides are designed in a way that supports your mission as a DRR educator.

Lastly, sharing and networking are important in making our schools safer and our students better prepared. Think about forming partnerships with other schools in your area or even those in other countries. If you do creative and successful DRR activities at school or in your community, share them through the media, your school's website, your personal blog, etc.

You understand the value of DRR education, know how to perform it in your school as well as recognize the need to make it a student-centred process and to involve the students' families and communities.

You're good to go!

OVERCOMING CHALLENGES TO EFFECTIVE DRR LEARNING

As you have come to learn, being a DRR educator is easy. You can incorporate DRR themes in any subject and do it through various exciting activities inside and outside the classroom. Still, you might find some challenges to become the ideal Risk-Smart Champion, Preparedness Superteacher and Wise Resilience Educator you want to be. Here are some thoughts on how you could overcome some of those possible challenges.

Challenges	Suggestions
<p>No special equipment/learning materials for DRR education; No budget for purchasing such equipment/learning materials</p>	<p>You don't need specific equipment for facilitating DRR learning. You can, and should, use things that you, your school, your students or your community already have. Almost everything needed for the activities suggested in the Teachers', Students' and Parents' Guides can be easily found around you or can be easily substituted with things that are available around you.</p> <p>Don't be shy about accessing the resources (knowledge, skills, tools, venues, transportation) that your community already has. To support DRR activities both in class and outside, you can, for example, ask parents if they can spare some materials to make puppets or warning signs. You can also invite people who have knowledge about disasters, how to do first aid or can teach students how to purify water. Engage the local business community, maybe they can help, too.</p>
<p>No access to the internet</p>	<p>You don't need the internet to facilitate DRR learning. While there are many DRR references online, there are plenty of local knowledge, practices, wisdom, people and organizations that can enrich your DRR learning.</p>
<p>No DRR textbooks</p>	<p>You don't need textbooks. Keep in mind that they are usually not adapted to the local context. By using local resources, you can provide your students a better and more relevant DRR education than by using textbooks.</p>
<p>No time allocated for DRR in the curriculum</p>	<p>You can always tweak the curriculum. You can simply use DRR-related themes, news and stories as examples in your regular teaching. For example, in mathematics you can talk about disaster statistics, in language studies you can have students write letters or poems about disasters, etc. You can also choose to integrate DRR into co- or extra-curricular activities instead of in-class teaching.</p>
<p>No time to prepare for teaching DRR</p>	<p>Don't worry, many of the activities and exercises that are proposed in these Guides are student-led.</p>
<p>Lack of knowledge in DRR</p>	<p>Throughout the Guide, we use the term 'DRR learning' instead of 'DRR teaching'. This is because you are learning DRR together with your students.</p> <p>Not knowing everything about disasters, risk, vulnerabilities and capacity does not blow your chances of being a good DRR educator. You can simply invite people who know more about DRR or are experts in disaster-related fields to your class. You can ask government agencies and NGOs if they can provide DRR training sessions for you and your colleagues or for your students and the wider community. You will end up knowing a lot about DRR when you engage with your students' and the community's DRR activities.</p>

Challenges	Suggestions
No experience in facilitation	Like everything else, it takes time and practice to become good at facilitating learning sessions. Start slowly, by trying out different methods within your usual class activities. Try to allocate a specific time to debrief activities. Ask your colleagues for help — you can, for example, organize a training session for two or more of you where you practice facilitation among yourselves after school, or when you have an hour off. Sit in your colleagues' class to learn from them and to provide feedback on how they are doing. Try team-teaching on certain topics, as it's easier to facilitate a classroom if there's more than one teacher. Try to get your students' feedback on how they like the changes in your teaching style and if they have any suggestions on how you could improve their learning experience.
Unsupportive school management	You can get students, parents and your colleagues to collectively try to convince management about the importance of learning DRR at school. You can also simply use the freedoms you have as a teacher in designing your classes to introduce DRR themes. Or, you can encourage students to engage in extracurricular DRR activities that you could support outside of school.
Uninterested colleagues	Try to convince uninterested colleagues about the importance of DRR by sharing some examples of how DRR educators can make a difference. If they are still not interested, use your classroom to facilitate DRR learning as much as possible. If students are excited about it they might convince other teachers to also include DRR learning. If there's still no support in your school, try to engage with other schools in your area, maybe there are teachers there with whom you can discuss DRR learning and exchange best practices.
Unresponsive parents/community	People are busy with a lot of things. If there hasn't been a disaster in your area for a long time, it might take some time to get people involved and engaged. Don't get discouraged: try to do DRR activities with your students and engage parents and the community as much as possible. The outcomes of your DRR learning with students, such as risk maps, warning signs, etc., might have significant effects in making your community more aware of the risks and dangers related to disasters.
Difficulties facilitating psychosocial activities	If you have trouble facilitating psychosocial activities — possibly because you yourself are traumatized — try to find some help. Maybe you can work together with colleagues to do exercises jointly, engage and involve parents or community members who have skills in facilitation or are trained in psychology.

RISK-SMART CHAMPION, PREPAREDNESS SUPERTEACHER, WISE RESILIENCE EDUCATOR CHECKLIST

See how you score in your DRR skills. Take the test again in a year's time to see how you have improved!

Questions	Yes Today	Yes Next year
I know about the main hazards that my community/school face		
I know about vulnerabilities in my community		
I know about the effects of climate change		
I have included DRR topics into my regular classes		
I have developed a DRR lesson plan		
I have used facilitation as a method to teach/to teach DRR		
I have used the DRR learning methods listed on p. 16. (indicate the number)		
I have facilitated DRR activities/exercises introduced in this Guide. (indicate the number of methods)		
I have organized co- and/or extra- curricular activities on DRR		
I have invited experts/community members to talk about DRR issues in class		
I have discussed with my colleagues and/or the headmaster on how to integrate DRR learning into our curriculum		
My classroom has an emergency bag/box		
I know the evacuation route from my classroom		
I have engaged students' parents on DRR issues		
I am engaged in community DRR activities		
Our school has organized a DRR day		
I am a member of my schools disaster management committee		
I have organized disaster drills at my school		
I was involved in producing my schools multi-hazard risk assessment		
I understand the importance of psychosocial well-being for students		
I have integrated psychosocial activities into my classes		
I know how to take care of myself after a disaster		
I have made a family disaster preparedness plan for my family		
I am trained in first aid		
I can swim		
Total		

DRR EDUCATION RESOURCES

The following resources are organized according to the four steps in this Guide: knowing the basics, school safety, facilitating DRR learning, and psychosocial well-being. There are many other excellent DRR learning materials in existence and most of them can be accessed via the Internet for free.

Know the Basics	
Hazard and Disaster Information	<p>For general information on disasters, visit:</p> <ul style="list-style-type: none"> ■ The International Disaster Database EM-DAT (www.emdat.be) ■ The Global Risk Data Platform (http://preview.grid.unep.ch/)
	<p>For further information on earthquakes and seismic data, visit:</p> <ul style="list-style-type: none"> ■ The US Geological Survey (www.usgs.gov)
	<p>For further information on floods, visit:</p> <ul style="list-style-type: none"> ■ The Dartmouth Flood Observatory (http://floodobservatory.colorado.edu/)
	<p>For further information on volcanoes and volcanic activity, visit:</p> <ul style="list-style-type: none"> ■ The Smithsonian Global Volcanism Program (http://www.volcano.si.edu/index.cfm)
	<p>For regional initiatives in DRR, visit:</p> <ul style="list-style-type: none"> ■ The Central American Probabilistic Risk Assessment/CAPRA (www.ecapra.org) ■ The Pacific Disaster Net (www.pacificdisaster.net)
Guides	<p>ABCD Basic Disaster Awareness Guide (USAID & Istanbul Community Impact Project, 2002) This guide provides a well-illustrated scientific explanation on the science of earthquakes and provides tips on how to act during and after an earthquake strikes. http://toolkit.ineesite.org/toolkit/INEEcms/uploads/1057/Basic_Disaster_Awareness_Handbook.pdf</p>
	<p>World Guide on Local Disaster Management Experiences for Beginners (UNESCO & PWRI, 2013) This guide provides real disaster management experiences from many parts of the world—from Japan, India, Malaysia, Kenya, Brazil, to the United States http://www.icharm.pwri.go.jp/publication/pdf/handbook_on_local_disaster_management_experiences.pdf</p>
Teaching DRR	
DRR Education and Children	<p>Child-focused Disaster Risk Reduction (Asian Disaster Preparedness Centre, 2007) This paper discusses the importance of children's participation in DRR education. http://www.ineesite.org/uploads/files/resources/doc_1_Child_Focused_Disaster_Risk_Reduction.pdf</p>
	<p>Living with disasters and changing climate: Children in Southeast Asia telling their stories about disaster and climate change (Save the Children, 2010) This compilation comprises stories from Thailand, Indonesia, Vietnam, and the Philippines about what action children can take on DRR. http://www.preventionweb.net/files/submissions/15087_Livingwithdisastersweb.pdf</p>
DRR teaching and learning materials searchable via online database	<p>INEE Resource Database Resources on a wide array of topics, including climate change. http://www.ineesite.org/en/resources</p>
	<p>PreventionWeb Education Materials Large collection on teaching and learning materials on DRR. http://www.preventionweb.net/english/professional/trainings-events/edu-materials/</p>
Climate Change	<p>UNITAR — CC: Learn UN materials relevant to climate change learning. http://www.uncclearn.org</p>
	<p>Climate Extreme: How young people can respond to disasters in a changing world (Plan International & Children in A Changing Climate) This publication deals with the issue of climate change and how it interacts with our daily lives. It also provides some ideas on DRR activity for children in secondary school. http://plan-international.org/files/global/publications/emergencies/climate-extreme-english</p>

DRR Education Activity Book	<p>Let's Learn to Prevent Disasters! Fun Ways for kids to join in Risk Reduction (UNISDR and UNICEF) This well-illustrated booklet gives a clear overview of the basic concepts of DRR and how children can take action in their community. The booklet is written for children between the ages of 8 and 12, and can be used as a supplemental material in classrooms. http://www.unisdr.org/files/2114_VL108012.pdf</p>
	<p>A Natural Disaster Story (World Scout Bureau) A drama based activity that explores how to cope when faced with a natural disaster. http://www.scouts.com.au/images/upload/base/18145484.pdf</p>
	<p>Simulation Activities for Disaster Risk Management for Use in Schools and Camps The guideline provides step-by-step disaster drill instructions for teachers and is suitable for children in Grade 9-11. http://www.preventionweb.net/files/8094_SLQKitCAMPSimulation.pdf</p>
	<p>The Alert Rabbit (Part 1-2) (Save the Children, 2008) The book comes in two parts: whereas the first part consists of a tale composed by a group of primary school students in Ranong, Thailand, the second part comprises many interactive games and examples on child-led DRR activities. http://resourcecentre.savethechildren.se/sites/default/files/documents/3239.pdf (part 1) http://resourcecentre.savethechildren.se/sites/default/files/documents/3240.pdf (part 2)</p>
	<p>1-2-3 of Disaster Education for Typhoon, Flood, and Earthquake (UNISDR, European Union and Kyoto University, 2009) This manual provides teachers with useful guidelines to start a year-long DRR education program on typhoon, flood, and earthquake as well as workbooks with various activities for children. http://www.unisdr.org/files/12088_123sm.pdf</p>
	<p>Children in Disasters — Games and Guidelines to Engage Youth in Risk Reduction (IFRC, 2010) The publication provides guidelines for effective engagement of children and young people in DRR education, as well as a list of games that educators can use for DRR education. http://www.preventionweb.net/files/16726_16726childrenindisastersgamesandgui.pdf</p>
	<p>Let's Be Prepared for Disasters: Activity Book (UNESCO Myanmar, 2010) The book consists of a list of DRR activity for children, ranging from drawing a risk map to puppet-making to creating a family preparedness plan. http://www.unescobkk.org/fileadmin/user_upload/esd/PCPD/MyanmarEng/activity_book_English__New__optimized_reduced.pdf</p>
DRR Education Board Games	<p>Safari's Encounter with Coastal and Marine Hazards (UNISDR Africa and ICPAC, 2012) The storybook tells the adventure of Safari, a young boy from Africa, in learning about coastal and marine hazards, ranging from oil spills to storm surge. It also provides information on climate change as well as some preparedness activities, such as learning how to swim and planting mangrove in deforested coastal areas. http://www.unisdr.org/files/26439_26439safariencounterwithcoastaland.pdf</p>
	<p>Survival Island (European Union and SOPAC) The package comprises printable board games with which teachers can help students to learn about tropical cyclones, earthquakes, tsunamis, landslides, volcanic eruptions, and floods. http://www.pacificdisaster.net/pdnadmin/data/original/SOPAC_2008_Survival_Island_Set.pdf</p> <p>Disaster Master (UNESCO Bangkok) Disaster Master is an educational board game that conveys messages through answer cards to help students understand what natural hazards are and what actions can be taken to reduce their impact. The game covers six kinds of natural hazards: earthquakes, tsunamis, floods, landslides, volcanic eruptions and hurricanes. http://www2.unescobkk.org/elib/publications/107/ and http://www.unescobkk.org/ru/education/esd/resources/brochures-multimedia/</p>

Safe Schools

Disaster and Emergency Preparedness: Guidance for Schools (IFC, 2010)

This guide provides school administrators and teachers with a comprehensive explanation on school disaster management as well as checklists on school disaster readiness and resilience, potential hazards, school building safety, disaster drills, emergency provisions, class safety, and family disaster preparedness plans. <http://www.ifc.org/wps/wcm/connect/8b796b004970c0199a7ada336b93d75f/DisERGuide.pdf?MOD=AJPERES>

School Manual on Emergency Preparedness and Response (UNESCO Namibia, 2010)

This manual consists of practical guides for educators on how to involve children, parents, and community during DRR activities in order to build a stronger culture of disaster risk reduction. http://portal.unesco.org/en/files/47662/1274091954110-0384-A4_Manuals.pdf/10-0384-A4%2BManuals.pdf

Comprehensive School Safety Framework (Global Alliance on Risk Reduction and Resilience in the Education Sector, 2013)

This booklet introduces the three pillars of the comprehensive school safety framework. http://www.preventionweb.net/files/31059_31059comprehensiveschoolsafetyframe.pdf

Towards A Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into to School Curriculum (UNESCO and UNICEF, 2014)

This technical guide explains the process of integrating DRR into the school curriculum and provides guidance for each phase, i.e. planning, classroom facilitation, assessment, etc.

Psychosocial Well-being

Coping With Disasters: A Guidebook to Psychosocial Intervention (John H. Ehrenreich, 2001)

This guide provides guidelines on how to help people coping with the emotional effects of disasters. <http://www.toolkitsportdevelopment.org/html/resources/7B/7BB3B250-3EB8-44C6-AA8E-CC6592C53550/CopingWithDisaster.pdf>

Training Manual on Psychosocial Well-being for Teachers (AVSI East Africa, 2003)

Although the manual puts more emphasis on psychosocial support in post-conflict settings, it provides valuable background information and ideas on psychosocial activities in classrooms. <http://www.avsi.org/wp-content/uploads/2011/09/5aTrainingManualTeachers.pdf>

Healing After Trauma Skills: A Manual for Professionals, Teachers, and Families Working with Children After Trauma/Disasters

(Robin H. Gurwitch & Anne K. Messenbaugh, 2005)

This book provides a step-by-step instruction for various psychosocial activities, ranging from exploring what had happened to relaxation techniques. http://www.nctsn.org/nctsn_assets/pdfs/edu_materials/HATS2ndEdition.pdf

Helping Children After A Disaster: A Children's Mental Health Guide for Educators (Texas Mental Health Association, 2005)

This article explains children's responses to disaster according to each child's age group.

http://www.preventionweb.net/files/8032_mentalhealthguideeducators.pdf

Creating Healing Classrooms: Guide for Teachers and Teacher Educators (International Rescue Committee, 2006)

This manual gives explanations, hands-on teaching strategies, and list of psychosocial activities, which teachers can use to build a healing classroom. <http://www.rescue.org/sites/default/files/migrated/resources/hci-tools.pdf>

Psychosocial Well-being Activity Book

...And Now What? A Helping Hand for Children Who Have Suffered A Loss

(Gilbert Brenson-Lazán & María Mercedes Sarmiento Díaz, 2006)

This story can help children to explore their trauma by themselves. http://www.preventionweb.net/files/3952_PostDisasterChildCare.pdf

APPENDIX

1. The Five Dimensions of DRR Education

Dimension 1: Understanding the Science and Mechanisms of ‘Natural’ Disasters

The first dimension is about developing an understanding of the science and mechanisms of natural hazards such as cyclones, tsunamis and volcanic eruptions: why they happen, how they develop, where they occur, their frequency and power, their physical impacts as well as the trends and patterns in their occurrence.

Dimension 2: Learning and Practicing Safety Measures and Procedures

This dimension emphasizes on the need to get familiar with hazard early warning signs and signals, with instructions in evacuation or sheltering procedures, drills and exercises, with basic first aid and the contents of a first aid kit, with health and safety measures, as well as with steps on how to stay safe after a hazard has subsided.

Dimension 3: Understanding Risk Drivers and How Hazards Can Become Disasters

The third dimension of DRR education encourages learners to act proactively in reducing risk through a thorough addressing the elements at work in the fundamental disaster risk formula:

$$\text{Disaster Risk} = \frac{\text{Natural Hazard} \times \text{Vulnerability}}{\text{Capacity of Societal System}}$$

Dimension 4: Building Community Risk Reduction Capacity

The fourth dimension of DRR education engages learners in the processes of resilience building in their own community through grassroots level initiatives such as performing local vulnerability assessment and mapping initiatives, identifying hazards, developing resilience action plans, and implementing those plans. The action-oriented learning dimension of DRR education offers hands-on experience of participatory citizenship/civics education.

Dimension 5: Building an Institutional Culture of Safety and Resilience

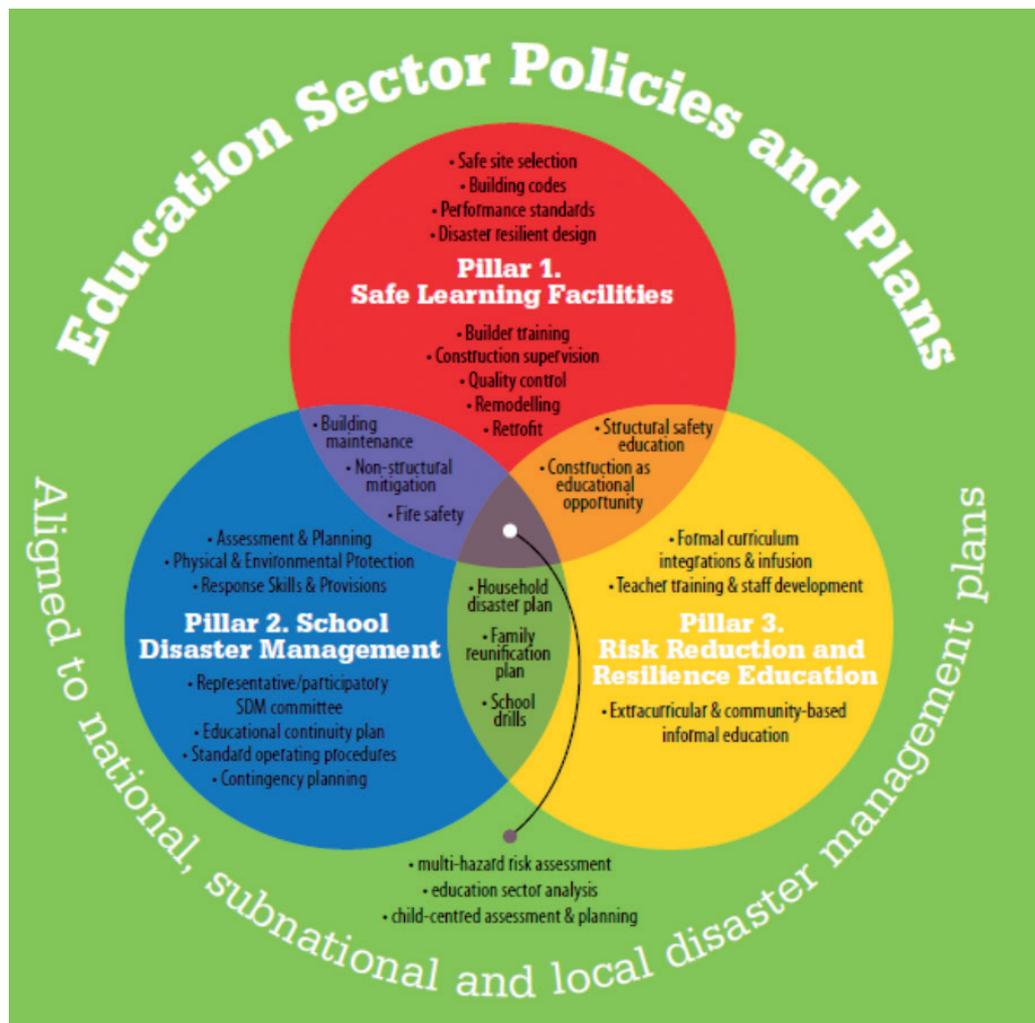
The fifth and final dimension focuses on blending the structural and non-structural elements so that the school becomes a DRR learning community or organization oriented towards building a culture of safety and resilience. It involves principals and teachers in looking for possibilities to give a voice to students in the curriculum, in their daily lives and in decision making processes in school regarding both structural and non-structural aspects of safety and resilience building. The ideal is that the school becomes a DRR learning laboratory — the campus becomes part of the curriculum.

Source: UNESCO and UNICEF. 2014. *Towards a Learning Culture on Safety and Resilience: Technical Guidance for Integrating DRR into the School Curriculum*. Geneva, UNICEF.

2. How the Topic of Climate Change Could be Taught in Several Different Subjects

Subject	Activities
Agriculture	<ul style="list-style-type: none"> Studying the global and local impacts of a changing climate on agriculture Studying and planting climate-resistant crops Discussing climate change impacts with local farmers
Arts – Visual and Performing	<ul style="list-style-type: none"> Making drawings of how humans influence the climate Creating awareness materials (posters, booklets, murals) to make other students or the community more aware of climate change
Biology	<ul style="list-style-type: none"> Learning about climate change adaptation Learning about the effects of climate change on species and habitats Doing climate change adaptation in the schools' surrounding community (tree planting, mangrove planting, etc.)
Civics/Citizenship	<ul style="list-style-type: none"> Discussing how communities can organize to mitigate and adapt to climate change Studying the concept of climate justice Learning how the international relations, treaties and agreements on climate change work Learning about climate mitigation and adaptation policies and activities in your country
Geography	<ul style="list-style-type: none"> Studying maps of climate vulnerability and discussing why certain areas might be particularly vulnerable Drawing maps to confirm the different sea-level rise predictions
Health Education	<ul style="list-style-type: none"> Discussing the possible health impacts of climate change Learning how one can prepare to mitigate those health impacts
History	<ul style="list-style-type: none"> Learning about the history of climate change science and climate change negotiations Learning about the history of fossil fuel use in the world/your country Discussing how the environment has played a role in the rise and fall of civilizations
Language and Literature	<ul style="list-style-type: none"> Writing letters to ask world leaders to take climate change mitigation seriously Writing essays about the impacts of climate change in your country/community Reading and discussing IPCC reports to improve understanding of scientific texts
Life Skills	<ul style="list-style-type: none"> Organizing a climate change debate, debating different adaptation and mitigation proposals for your community Organizing a simulation on UNFCCC climate change negotiations Learning about project management by organizing a community adaptation project
Mathematics	<ul style="list-style-type: none"> Calculating and drawing curves of CO₂ emissions Analyzing IPCC climate change predictions Calculating sea level rise in your area Calculating the predicted costs of climate change
Science and Technology	<ul style="list-style-type: none"> Studying the basic science of climate change Studying the links between climate change and disasters Learning about alternative technologies that can be used to mitigate climate change Making experiments to show how water expands when its hotter and how melting sea and land ice impacts water levels
Social Science/Studies	<ul style="list-style-type: none"> Learning about the possible socio-economic effects of climate change Learning about the importance of climate change adaptation and mitigation Discussing which group of people might be most vulnerable to climate change impacts Discussing how environmental change and migration go together in your country
Vocational/Technical Education	<ul style="list-style-type: none"> Learning how to make windmills Learning how to install solar panels Learning how to make a solar stove

3. Comprehensive School Safety



Source: Global Alliance in Risk Reduction and Resilience in the Education Sector. 2013.

4. Five Stages of a Multi-hazard Risk Assessment

Stage 1: Looking at hazards and vulnerabilities

1. List all the hazards your school is exposed to (both natural and man-made). This is a great opportunity for students to learn about different hazards, sciences about hazards and about their impacts;
2. Discuss how likely those hazards are over a certain time. You can rank them, for example from 1-5. Also think about which hazards are seasonal and which are present all the time. This is a great opportunity to invite experts, have students perform online or library research, visit the local disaster management office or meteorological centre, etc.;
3. Discuss what impacts the different hazards could have and rank how severe they are. Think about a whole range of impacts from physical (death, injury, damage), economical (costs of damage, disruption of livelihood activities), social/cultural (loss of friends, disruption of social networks), environmental (loss of habitat), psychosocial (grief, trauma, disorientation), educational (disruption of teaching/learning activities, dropout);
4. Multiply the risk scores for each hazard with the vulnerability scores for each hazard. Then rank the hazards according to priorities (which one needs the most attention).

Stage 2: Assessing structural and non-structural safety

1. Assess the structural safety of your school based on the hazards and vulnerabilities identified in stage 1. Remember that the location and design of your school can affect its vulnerability. Assessing your school's structural safety is of course a very technical task and you should consider asking experts (an architect, engineer or trained experts suggested by the disaster management authorities) to help with the assessment. Still, you and your students can be involved in the process. Students can learn about soil types (biology, geography), structural engineering (physics, mathematics, geometry), safe building standards (civics, physics) and can interview the experts or even participate in the school inspection. School management and school disaster management committees should think beforehand about how and when possible weaknesses can be addressed. Many countries have funds for school remodeling and retrofitting. Often United Nations agencies and international NGOs are able to provide some help.
2. Assess the non-structural safety of your school based on the hazards identified in stage 1. Note what can be done and who should do it. Here are some examples:
 - a. Fire safety: Make sure that flammable materials are limited, stored and secured; that fire evacuation routes are safe and clearly marked; that fire extinguishers are working and can be easily found; that electrical installations are made to high standard; etc.;
 - b. Cyclone and storm safety: Think about objects outside the building that can be torn away, fly away or be battered by wind;
 - c. Think about objects that may slide, fall, or fly, and especially anything that can cause injury or block exits.

Again, this is a prime learning opportunity for your students. Students can research what dangers they might face from each hazards and on how to improve their safety. Inspecting classrooms and the school building will already help them envision evacuation routes and the dangers they might face in case an evacuation is necessary.

Stage 3: Looking at capacities

1. Make a list of the knowledge, resources and skills in your school and in your community that can help mitigate the negative effects of hazards;
2. Discuss how these can be used to make the school a safer place and in a disaster situation;
3. Discuss with the school community how skills that are needed can be gained through training, simulations, exercises;
4. Discuss emergency provisions for your school, like emergency bags, buckets, emergency water storage, first aid, fire suppression materials, etc.

Students can be helpful in mapping capacities at school and in their community. You can make excursions to vital resources (such as hospitals, fire stations, disaster management office) or invite experts to discuss the community's capacities. Older students can help train younger students in first aid and search and rescue skills. Students can also take the responsibility for making sure that emergency bags are stocked and in good order.

Stage 4: Creating a school risk map

One great tool to help visualize evacuation processes is a school risk map. It should include the following things:

- Entrances and exits;
- Evacuation routes from every room in the building;
- Building, underground and overhead dangers;
- Location of flammable and hazardous materials;
- Location of fire suppression and first aid equipment;
- Shut off locations for water, gas and electricity;
- Emergency assembly areas.

Additionally, you can create a map of the neighborhood that includes evacuation routes, staging areas, dangers and resources in the neighborhood, vulnerable people in the neighborhood, etc. (School and neighborhood risk maps are ideally suited to become student DRR activities. The community risk mapping exercise in the Students' Guide (pp. 25-27) discusses this in more detail).

Stage 5: Act

The school administration, school disaster preparedness committee and school community as a whole need to take the necessary actions recommended by the multi-hazard risk assessment:

- Preparedness and contingency plans should be made or revised based on the risk assessment;
- Structural and non-structural adjustments should be made to increase safety;
- Trainings, exercises, drills and simulations should be organized in a routine manner to improve knowledge and skills of all involved.



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A Teacher's Guide to Disaster Risk Reduction **STAY SAFE AND BE PREPARED**

This guide is part of a three-book Compendium on Disaster Risk Reduction (DRR) that aims to introduce concepts, exercises and best practices on disaster preparedness and response to teachers, students and parents.

The Compendium is based on the belief that comprehensive disaster preparedness and resilience-building is most successful when the whole (school) community, starting with students, parents and teachers, is involved and when the process actively encourages students to take the lead on some activities.

This Teacher's Guide provides useful resources for experienced as well as novice teachers to become DRR educators. Teachers will learn how to engage students in DRR learning through challenging and interesting lesson plans, and how to overcome challenges in facilitating DRR.

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